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PHYSICAL EDUCATION NUMBER

FREDERICK RAND ROGERS PH. D., EDITOR
DEAN OF STUDENT HEALTH AND PHYSICAL EDUCATION AND
PROFESSOR OF EDUCATION, BOSTON UNIVERSITY

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EDUCATION

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THE RELATION OF PHYSICAL EDUCATION TO THE HEALTH AIM

FREDERICK RAND ROGERS, PH.D.

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I

EDUCATORS generally are aware that "health is the first aim of education." But this aim has not yet become a positive guide to methods and programs. Particularly confusing to school administrators are the conduct and objectives of physical education. Are physical activities included in the curriculum because they promote physical fitness or for other reasons? Even physical educators differ, and often violently, on this fundamental question. This paper suggests an answer in conformity with national needs, the proper functions of education and the nature of physical activities.

Concerning national needs, the plain truth is that health services are more in demand than ever before. Although it has solved some problems, the medical profession is now confronted with other and greater ones. Having got tuberculosis, scarlet fever and small pox under control, cancer, heart diseases and mental diseases are increasing at increasing rates. In 1932 over seven million persons were so ill they were admitted to hospitals. President Hoover's Committee on the Costs of Medical Care reports that only some forms of state medicine will be effective in meeting an approaching emergency.

It should be highly significant to educators that the medical profession is gradually turning to preventive medicine for the ultimate solution of its particular problem. The public health service is its strongest arm and sanitation is its more effective weapon. But slowly and steadily education is becoming recognized by physicians as the ultimate tool for eradicating disease and promoting physical fitness for active living. It will be evident to educators, therefore, that public school departments must devise and administer effective health education programs if they are to avoid losing this function to public health departments.

Moreover, health education must always be a fundamental program of the public school, quite apart from the approaching emergency in public health. To say that "it is better for a man to maintain himself in good health than to load himself with learning" is only to state a truism which

teachers should act upon rather than ignore. The medical services of the nation can only care for the two or three per cent of the population in greatest need. Who, if not teachers, are to care for the 30-40 per cent who are below par but not yet sick in bed? Besides, learning itself is dependent on curiosity, activity and sustained interest; but these are not possible without health; and the greater the health, the greater the curiosity, activity, interest, and therefore the longer the retention of whatever is experienced.

Health education is necessary, then, both to promote learning and to preserve health itself. If educators neglect the responsibility, others will assume it. But it should be intolerable to educators to relinquish to others this vital function.

II

Shall physical education play any important part in the public school's program of health conservation? This question cannot be properly answered until it is known whether physical education can conserve health.[1]

Now, health may be defined as *capacity for activity*, or, more, explicitly, "that condition of an organism which conduces to the largest amount and highest quality of purposeful activity." "Activity," of course, includes mental, physical and social behavior. A sound heart is desirable *because* it is indispensable to any large amount of activity. Good digestion is desirable to promote higher qualities as well as large amounts of activity. One can hardly even be pious when suffering from dyspepsia. Any type of doing which affects other persons besides the doer involves the muscles. Indeed, life is very largely muscular. It may even be shown that, if any choice can be made between the chicken and the egg, mental activity is useful primarily to guide the muscles to food and safety. But even if physical activity is for the sake of "the higher life," it is none the less indispensable.

Is it possible to protect and increase capacity for activity by means of or through large-muscle exercises? It is, and this is one fact of which educators may be certain. From ancient times, it has been realized that health is promoted by vigorous muscular activity. Thus, the only way properly to develop the circulatory and respiratory functions is through large-muscle exercise. Digestion is promoted likewise, and even the nervous system is relieved of both physiologic and psychic clogs to normal functioning by large-muscle activity.

Even more fundamental: the strength of the muscles themselves—which always have had and must have so large a share in life's work and play, and whose activity is necessary to make useful to society the most exalted ideals—the very power and skill of the muscles themselves to perform the tasks set by the will, are dependent on muscular activity. Even the will itself—but attend to a psychologist's warning: "If the muscles grow relaxed and flabby, the dreadful chasm between good intentions and their execution is liable to appear and widen. Character itself might in a sense be

1 This paper treats only of the physical educator's responsibilities for the guidance of large-muscle activities. Dr. Oberteuffer's contribution discusses health instruction, or the inculcation of knowledge and habits and attitudes which result from health instruction.

defined as a plexus of motor habits. . . ."[2]

Nor is properly directed large-muscle activity useful only to the relatively normal individual. Flat feet, with their attendant pains, nervous strains, physical unattractiveness and lessened desire for activity may often be corrected by wisely-directed exercises. In Quincy, Massachusetts, for example, during September 1932-January 1933, some 33 girls and 38 boys showed from 21 to 39 per cent average improvement in arch-angles due to proper physical education programs. Good posture, which is essential to the highest self-respect and confidence as well as to the best health, is protected and developed by proper physical exercises. "Nervousness," which leads to many psychic "complexes" as well as mental deficiencies and positive disorders, is reduced by exercise in proper amounts and of proper types. "Recreational therapy" is a recognized form of treatment for many mental patients. Obesity is reduced by exercise as well as diet. Although an abundance of physical vitality seems not to prevent disease, nevertheless it is one of the best requisites for surviving unwanted microbes!

And finally, the strength of the muscles themselves is capable of extraordinary improvement even in a very short time. In Quincy, again, some 240 boys and 239 girls were assigned in September to daily physical education programs because of low vitality. Selected by objective and highly valid and reliable tests, and retested in January, they showed average gains of 26 and 19 per cent respectively. Many improved over 50 per cent in physical vitality and show the results in professed and demonstrated eagerness for "life more abundantly."

These are some of the possible health services of wisely guided physical education programs adapted to the individual needs of pupils as determined by proper examinations and tests.

III

If the foregoing analysis is not greatly in error, physical education can and should be definitely and ever more effectively directed toward the conservation of the nation's health, or at least toward the improvement of its physical fitness. The need for such services is steadily becoming more imperative; the various medical services are so far from meeting the crisis otherwise that they are turning to preventive medicine; health education is a prime function of the public school; capacity for physical activity is greatly improvable through wisely guided large-muscle exercise. American physical educators should be profoundly impressed by the fact that in Europe there has been a rebirth of interest and even governmental concern for physical education, and that, almost universally, the fundamental aim is physical development.[3]

When the average American public school physical education program is investigated, however, it soon becomes clear that health or physical fitness is not now one of its fundamental aims. It would even be strictly accurate to state that physical education has had no clear aims during the past decade,

2 G. Stanley Hall, "Adolescence."
3 See Carl Schrader's article on page 453 of this issue of "Education."

unless "winning games" or simply "keeping the children active and out of mischief" are clear objectives. The reasons for this condition of affairs are various; but they are of no material importance. Whether the coach is "to blame" or the principal or headmaster or school committee should be declared responsible, or the community be found negligent or ambitious for the caps and bells of athletic victories —or whether physical educators should be censured for losing their way in a multiplicity of nebulous hopes concerning "character education" — such speculations are of no immediate help to the educator, physician or statesman seeking to conserve the nation's health, whether physical, financial or social.

In the present crisis it should be sufficient for the statesman to know that physical education *can* increase the physical fitness of youth — and very greatly. He may properly demand, if it is necessary to choose, that this end be accomplished, before any other be undertaken.

The medical man should look to the local school department to maintain at a fairly high level the physical vitality of the children in its care and to correct many physical defects before they reach the extreme state which requires a doctor's care, and be ready to assist the physical educator in determining the most efficacious activity programs for any individual children who are far below normal.

The educational administrator should provide his physical educators with medical guidance, measuring instruments, facilities and assignment of pupils to classes primarily in terms of their health status and needs; and should require of them reports of pupil progress in terms of physical vitality.

Physical educators themselves should at once take steps to render their programs most useful to their communities and most defensible before budget directors. To accomplish this end it is not necessary to abandon interschool or intramural athletics, or even greatly to modify gymnasium routines. It is essential, however, that every pupil be examined, tested and interviewed to determine the general type and specific programs of rest and activities which are best suited to his or her needs, that actual programs be adapted to the individual needs so determined, and that the results thereof be established by proper measurements and be used both as guides to subsequent treatment of pupils and as evidence of progress to secure increased public confidence and support for future programs.

IV

The writer is not insensible to the fact that physical education may develop moral character and provide useful leisure-time habits and interests. Indeed, he professes to be a staunch advocate of such values of large-muscle activities, even going so far as to incur some popular disapproval by instituting methods in athletics which will most surely develop courage, initiative, cooperation and fair play. Nevertheless, he believes that the future of physical education is intimately and inescapably dependent on its contributions to health. *If any choice must be made at this time, let physical educators concentrate on the realization of the health objectives first; and derive*

the satisfaction of knowing that health is character education par excellence, and that those physical educators who have most conscientiously striven to improve their pupils' physical fitness have (and often much to their surprise) discovered the social character of both teachers and pupils to have improved concurrently.

If the 20,000 men and women in the United States who are responsible for physical education and athletic coaching in public and private schools were to devote themselves for five years seriously (though not exclusively) to the correction of physical defects and the development of physical vitality, it is safe to predict that they would effect an improvement of 10 to 25 per cent in the national capacity for purposeful activity, reduce by a large percentage the costs of medical care, provide at least a partial solution to the problem of public health, and establish their program on a firm foundation.

BASIC PRINCIPLES AND PRACTICES OF PHYSICAL EDUCATION AS WESTERN EUROPE SEES THEM

CARL L. SCHRADER
MASSACHUSETTS STATE SUPERVISOR OF PHYSICAL EDUCATION

A physical education program where pupils run the games and "an atmosphere of joyful play predominates" is worthy of the serious attention of all educators.

THE purpose of, and the need for physical education may be said to be the same the world over. More than that, both purpose and need are of old and ancient origin. Its purpose from the beginning was educational, even though the thought of strengthening the national defense made its appearance early. There can be no objection to the latter motive inasmuch as it is aimed at defense and not aggression. Switzerland, surely a peaceful country, is perhaps the best defensively prepared today, largely because of its splendid program of physical education which embraces everyone.

While the content of programs is more or less alike, methods vary in the different countries. Since the passing of the days of Greece, when physical education was one of the cultural arts, Western Europe has probably devoted more keen thinking and planning to the physical education of its youth than has the rest of the world. The measure leading to such a conviction, to be sure, is other than a rating according to Olympic honors. One must evaluate outcomes as they manifest themselves in a whole race. The physical education movement in Western Europe had its beginning in the elementary schools, and only eventually touched the secondary schools. In America, however, the first real and earnest effort was made in the secondary schools, and even now our elementary schools are lagging pitifully behind.

The youth movement, which had its birth in defeated Germany, has become a general European movement and is accepted as a great epoch in

the remaking of Europe. The outstanding fact in the physical education programs is that there is a real mass movement toward definite objectives. *The objectives are impressive because of their simplicity and brevity. They are bodily and physical development, and Education (Bildung). The first includes all health habits as well as activities, and the latter includes all human behavior. The training of will power is stressed by recognizing a trained will to be the basis of all morality and culture. Doing, as well as knowing, is accepted as a necessary outcome. It is not a question of "either-or" but a frankly accepted need for "as well as."*

In the elementary schools the instruction rests entirely in the hands of the classroom teacher, whose training has also included preparation in physical education. In the secondary schools there are both types of teachers — the special subject teacher and the general academic teacher. The school day is longer than ours and so too are the school weeks and years.

Physical education has not been static anywhere for there have been great changes in every country. It might be said that the changes in Europe were slower in being made than they were here. However, it must be admitted that in this deliberation there lay a certain safety which forbade losing sight of the basic objectives of the program, or the means leading to these objectives. In our endeavor to keep abreast with education in general we accepted hastily many untried and unproven new theories, and at the same time cast aside principles which were and are so basic in education that in the end they must prevail in spite of restless progressiveness. The program of physical education in Europe still recognizes discipline as a factor. Not the autocratic sort of old, which aimed to weld the unit into one machine-like mass, but a freer and more understandable sort, with respect for authority still a requisite.

Reverend Cyril A. Alington, Headmaster of Eton, expressed himself recently on the subject of discipline. He said, "We base our education in England rather squarely on the theory that discipline is necessary and a good thing. . . . The theories about education here in America, that are based on the idea that the child should have everything he has to do made so attractive that it doesn't seem like work, seem to me to be productive of little good."

The notions to which the Reverend Mr. Alington referred have raised havoc in physical education in this country. A change of type of discipline was due, but it was never intended to put it into the discard entirely. The theory that interest begets effort should never have supplanted the reverse theory that effort begets interest, because if education is to prepare youth for the art of living it is false to portray a future made up of nothing but joyful experiences.

While health education has not been heralded as the objective of physical education in Europe, there is discernible there a much keener and more careful health guidance in the pursuit of sports than there is here. There, the boys and the girls are the first consideration, not the outcome of a sport or game. Biological factors are used to protect the in-

dividual, such as the proper placement in groups, and the prevention of over-indulgence in sports, be it voluntary or forced.

The scope of the activities program has remained a wide one, while we have narrowed down to a comparatively few so-called "major" activities. In such a wider program it is possible to fit each one with a sport for which he or she is best adapted. Sports which are limited to private schools and colleges in this country are promoted in the general schools over there. For example, rowing is extensively used, and the rivers are alive with craft of all descriptions. At the dedication of the Berlin Stadium before the war more than 600 four-oared shells passed before the reviewing stand. Swimming is commonly taught and practiced in the schools there, and tennis, a rather new sport for Germany, is being rapidly developed for mass participation. The reason for the popularity of so many sports in Germany is that everyone is thoroughly instructed in them, and as a consequence they have an urge for practice and participation.

Competition among the schools is free from all commercial aspects. There are no great audiences for these physical education functions, and neither are there any paid officials. The boys and girls have a great deal more to do and say in the running of these games than do our pupils, and an atmosphere of joyful play predominates, without the strained feeling of seriousness which prevails at many of our sports. The press takes but little cognizance of these performances, and so the simplicity of play is preserved and the interest is centered where it rightfully belongs. There is no "Hall of Fame" for schoolboy athletes. There are no "All German" or "All Switzerland" teams selected, and no scholarships beckoning the youth to college for his ability in sports.

To comprehend the extent to which physical education has become a potent factor, one needs but to observe one of the festivals which are held in Switzerland, Germany and Czechoslovakia. Then one sees a whole nation at play. There are always from twenty thousand to fifty thousand active participants in these festivals. A rather noteworthy fact, which portrays the love of the individual for sport, is that each participant defrays his own expenses, which include costumes, travelling and lodging. The awards are never more than mere paper recognitions, but the presentation of them is given a setting that is truly beautiful and inspiring in its splendid simplicity, and they are accompanied by the acclaim of thousands of spectators. When one compares this with the cold-blooded way our prizes are handed over, it is to be wondered whether the European practice at Olympic Games awakens in our attending and competing athletes a desire for the adoption of their procedure of prize awards. There is an ideal involved here that is worth emulating,—an ideal that would serve to lessen the taint of commercialism and materialism which now hovers over many of our sport festivals and programs.

The time allotment for physical education in the schools in Germany is not the hoped for daily hour but they probably average more than we do, for in many places we have to be

thankful for two periods a week in the high schools and twenty minutes a day in the elementary schools. The latter schools in Europe have a better time allotment and equipment than ours have, but, on the other hand, we have far better equipment in our secondary schools. There all the teachers have sympathy for and an understanding of physical education, while we still have to explain it and plead for a place in the sun.

The training of teachers for this field in Europe has been a constant upward trend, as it has also been here. The outstanding institution in Europe today undoubtedly is the Deutsche Hochschule fuer Leibesuebungen, in Charlottenburg, Germany. Its magnificent and practical equipment, the staff of eminent men and women in every department, and a director who is a philosopher and a master of technique in all fields as well, lend a hue of thoroughness that is rather unique. The entrance requirements are very strict, and every student has to undergo a complete physical examination, as well as a rigid examination in all the practical activities to insure his technical ability. The mere practical teacher is disappearing rapidly, and the academic theorists who know only one or two sports are being relegated to staffs headed by men who have mastered all the fields in addition to filling the academic requirements.

Perhaps the sharpest contrast that confronts one in a comparison such as has been attempted here is that there is practically a spiritual ideal underlying the whole of physical education in Europe. It may be because they allow sentiment to play its part, and, after all, is not sentiment an enrichment of life?

"Man, on the one hand, is equipped with organs and senses in order to make the outer world inwardly conscious, and, on the other hand, equipped with life energy and limbs in order to manifest outwardly inner feelings."

HEALTH INSTRUCTION THROUGH THE PHYSICAL EDUCATION TEACHER

D. OBERTEUFFER, PH.D.
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Dr. Oberteuffer does not claim that the physical education department is prepared to assume the responsibility for health instruction, but he does maintain that it has the best available personnel to receive the necessary training.

HEALTH instruction in our schools needs a professional personnel. Coming into the curriculum as a functionalized physiology, it finds several groups of teachers only partially trained to teach it. There is no group entirely capable of doing it well. It will be the point of view expressed here that, of all the groups, physical educators have the best opportunity to give health instruction to the large mass of students.

The developments of the last two decades within the American curriculum have had a bearing upon such instruction. The general swing from the philosophy of the extrinsic or formal *subject-matter-to-be-learned* idea in education to the more functional *situations-to-be-experienced* type of teaching has had its effect on the kind of instruction now thought best to be given in health education. Some of these effects are, for instance:

1. A "scientific background" is no longer thought of as a reliable guarantee of eventual good health conduct.

2. A knowledge of anatomy and physiology is useful, not for their own sake, but only so far as they help answer problems of healthful living.

3. The actual or really experienced problems of life as they relate to health serve as the best material for instruction in health, rather than the traditional formally organized chapters of a text book on the systems of the body.

4. Modern subject matter must be vital to and functional in the life of the student, answering his needs, and being interesting to him because it helps him live a better life.

5. The teacher must see clearly the difference between extrinsic and intrinsic material; must teach in terms of the students' experiences; and must be broadly trained to answer the hundreds of student questions which become apparent as soon as the teacher delves into the actual problems of life as they are experienced.

6. Because of research into available and proper subject material, it is now evident that a definite and specific time for health instruction should be set aside in the schedule. This holds true for both elementary and secondary schools. There was a time when it was thought that health instruction could be given adequately in correlation with other subjects. Such correlation is considered, today, as worthwhile but insufficient to do the complete job thoroughly and justly. Specific instruction needs to be given.

These changes are significant. They have many corollaries not mentioned but they all point to a very different content and purpose of the modern

course of instruction in hygiene as compared to the older physiology. Physiology was usually taught by someone trained in science — and its recognition as a part of the curriculum was gained largely through the nearness of its purpose and content to the other biological and the physical sciences. Thus, the teachers of science had, at one time, the best opportunity to do something with hygiene or health instruction. That they did not capitalize their opportunity is witnessed today by the infrequency with which health instruction is offered throughout the nation.

In recent years health education leaders have advised that many persons be used as instructors and that health be so integrated and correlated with other subjects as to make it no problem to have health well taught. Cairns* reports that teachers of physiology, biology, general science, and physical education have been used more than others for this purpose. Teachers of home economics, the social sciences, and chemistry have also taught health. Rarely, but not without increasing frequency of late, have special teachers of health been employed in large schools. Generally speaking, however, there has never developed over the country at large a unified responsible personnel for giving instruction in hygiene. For history, English, and mathematics there has, but not for health. If the Principal wants some health instruction given no one teacher stands out as eminently qualified to do the work.

The problem, therefore, expands. It is not a question of finding some one teacher in some one school; or even of finding a small group of teachers for a school system. If health instruction is coming to be an accepted part of school curricula everywhere, then thousands of teachers now in service must be used or thousands of new ones developed. Where best to look for this personnel?

We can begin to answer this question by discussing the qualifications necessary to do health instruction adequately. Because the subject matter has not been, and probably never will be, standardized, it is impossible today to state qualifications in terms of specific training needed as shown by the use of the job-analysis technique. The best generalities, then, may suffice; and these are offered as (a) a knowledge of the subject matter of hygiene, and (b) an understanding of how to teach. The Liberal Arts point of view that educationists, generally, are being trained too little in subject matter and too much in methods seems tenable here. Health instruction cannot be given well unless the teacher knows hygiene. Health is, at best, an abstraction, and its subject matter is constantly changing. Research in the biological sciences constantly alters the nature of what is sound health advice. A basis of anatomy and physiology with thorough and specific training in hygiene and sanitation is necessary to equip a teacher with information to be taught. A teacher without this information is unsafe as a teacher of health.

Likewise, teachers knowing only hygiene subject matter, which they are unable to relate to an adequate philosophy of education, make cruel mistakes in teaching. Their tendency is

* Cairns, Laura, University of California Publications, U. 2, No. 5, 1929.

to follow the rote material of a text book; to teach the systems of the body, rather than its functions; to be interested in topography rather than the ways life is lived. It was this traditional technique which almost ruined the college hygiene courses a few years ago and led Wood to say that such courses were generally failures. It is on this point, for instance, that most physicians and nurses fall down. Their training has been preponderantly biological; they need greatly to know methods and philosophy. Good health instruction demands accurate interpretation of scientific information done psychologically and according to the best practices of scientific education.

With this background in mind it is proposed, as a solution to the large problem of personnel for health instruction, that the class room teacher teach hygiene in the elementary school, and in the secondary schools physical education be called upon to supply the personnel.

It should be said at the outset that it is not held for one moment that physical education is ready and equipped *now* to assume this responsibility. Some changes in viewpoint, in conception of values, and in the training and the certification of the physical educator will have to be made if the job is to be done well. These will be discussed later. But it does seem now, subject to change as the future unfolds, that physical education offers the best available personnel for giving this important instruction in health for the following reasons:

1. Because physical education classes enroll more students than do the other subjects. Physical education is usually compulsory. Hygiene, or health instruction, is as basic to a person's life as is mathematics or even English, and should reach *all* students.

2. Because in the large number of city and rural schools two teachers in such closely related fields cannot be hired, thus decreasing the possibility of a market for any considerable number of special teachers of health.

3. Because the personnel of physical education is well developed at present; a large number of teachers being now in service and in training.

4. Because physical educators, if properly trained, come closest to meeting the training qualifications in biology, human physiology, hygiene, and education, which qualifications are so necessary in health instruction.

5. Because, inherent in the activities of a properly planned physical education program, are many natural opportunities for the development of healthful conduct, the activities themselves are health building, and the physical education teacher has long been looked upon as a purveyor of physical fitness.

Undoubtedly, there are other reasons why the physical educator should be given the health instruction to do. These are some which stand out.

Now, what changes should be effected within the profession of physical education to make possible an adequate handling of the responsibilities which the teaching of hygiene along with physical education would entail? The following are suggested as important.

1. *Time allotment.* The most desirable plan to do justice to health instruction would allow at least one period per week of the upper six years

devoted entirely to hygiene. If such scheduling is impossible, one of the usual three physical education periods may be used; not, however, with the class in the gymnasium. Relative values indicate that the sacrifice of one physical education period for the sake of health instruction would not be amiss. The writer saw a simple and very fine alliance during the past year in a small city system where boys had physical education on Monday and Wednesday, girls on Tuesday and Thursday, and all joined in various classrooms under the same activity instructors on Friday for their health instruction — a simple, clear-cut and effective illustration of the operation of the combined program.

2. *Teacher preparation.* Physical education teacher-training institutions must incorporate a solid, substantial training in health education. A cursory course in hygiene will not do. There must be given to students of physical education a thorough training in hygiene, public health, child care, materials of health education, immunology, nutrition, administration of health education, and the teaching of hygiene. It is futile to expect a fine performer in athletics to have natural ability as a health teacher. Motor ability is indicative of motor ability only. We have had too many sad experiences of retired athletes turning into essayists and lecturers on health. A mastery of the techniques of teaching health in the classroom is as vital to success in this field as are the techniques of coaching basketball to a basketball coach.

3. *In-service preparation.* Physical educators now in the field must study, learn about and take an active interest in health education. The large body of physicians, public health officers, sanitarians, nutritionists, and others vitally interested in seeing the school health program developed to its fullest will continue to press the physical educator until the latter takes an active interest. Directors of physical education who have heretofore been devoting most of their time to the promotion of athletics must balance their time and budget so that health instruction receives its just desserts. Health instruction will always remain abstruse unless time is taken to read its literature, study its program and attend its conclaves.

In conclusion, it should be said that the best practice in any local situation would be to use the person for health teaching who is best qualified. It may be the nurse, physician, teacher of science, home economics, physical education, biology, or even history.

There is, today, no standard and uniformly trained personnel. Health instruction is important enough to deserve better treatment. Surely physical education could enhance its effectiveness and value if it would take seriously and accept tangibly its opportunities in this connection. The principal or superintendent should be able to rely upon the physical educator to carry on health instruction.

THE ADAPTATION OF PHYSICAL EDUCATION TO INDIVIDUAL NEEDS

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Few teachers of physical education have a program. "We have apparatus work on Monday, games on Wednesday, swimming on Friday. Why do we need to make out a program?" The writer of this article disagrees convincingly with this laissez-faire point of view.

Too little regard is had for the vast differences in individuals, most of whom need much personal prescription.

—G. STANLEY HALL.

THERE is a vast difference in our time between the amount of emphasis put upon individual attention in the classroom and in the gymnasium. Until recently, courses of study in the three R's and in physical education were designed for the *average* child. For "average" children they seemed to "fill the bill" fairly well. A comparatively few years ago, however, educators began to realize that all children are not average, that there is a group at one end of the distribution who find the work too difficult, and another — perhaps smaller—group at the other end for whom average work is too simple.

It was the retarded group which was the first to engage the attention of educational administrators. The pupils of this group, so it was claimed, were being held back because of stereotyped courses of study and were developing a habit of failure which would carry over into adult life. Consequently, strenuous efforts were put forth to save the retarded child.

But the process of development in physical education has been in the opposite direction. It is true that, as in the classroom, we started from a deadening uniformity in which children were considered to be all of the same pattern to be treated as trivial parts of a great machine. But in progressing from that type of instruction physical educators, partly from their own misguided impulses and partly from pressure brought to bear by others—among them school administrators—have swung strongly toward the intensive training of the superior pupils in the skills and strategy of interschool sports, while neglecting the primary physical needs of those needing attention most. This has been just the opposite of what was first done in the classroom.

There is no question that remediable defects are present. Every school makes this discovery in its health examination. Even pre-school children are not free from defects. In an investigation carried on by the Children's Bureau with over three thousand pre-school children,[1] 25.4% were found to have postural defects.[2]

The large number of adults suffering from remediable defects is an indication that either the home or the school has not been doing its duty

1 Children's Bureau. Physical Status of Pre-School Children, Washington, D. C., 1922, p. 59.
2 If children entering school have such defects, it goes without saying that a definite program of physical education should be organized for the pre-school child, possibly under the supervision of the public school authorities.

with respect to the proper physical education of children. "Too often, nowadays, the college or university department of physical education is called upon to adopt measures which would be quite unnecessary with an adequate system in the elementary and secondary schools, and to remedy conditions of malgrowth and maldevelopment which ought never to have been allowed to develop."[3]

Certain it is that no intelligent administrator of physical education will look for truly *corrective* benefit in general exercises taught to large classes as a whole. There have been too many physical educators who have been content to give simply "physical activity" with no knowledge of the results attained. We must have specific exercises, prescribed for the particular defects of certain individuals. The shot gun method will not do. ". . . having heard that Henry Taylor was ill, Carlyle rushed off from London to Sheen with a bottle of medicine, which had done Mrs. Carlyle good, without in the least knowing what was ailing Henry Taylor, or for what the medicine was useful."

It is equally unsatisfactory to give as large a percentage of our time as we do to a few skilled athletes who, of all our youth, need the work least. Anson W. Belding says:[4]

"The overwhelming victory of the United States in the Olympics has a significance for education. The American college, both directly and indirectly, has made athletics popular. Sport in the United States has become a big-scale business. A vast number of athletes have been produced. Record smashing has become a habit with these young people of our colleges, and with other groups acting in imitation. Keen rivalry has developed individual prowess, until we have, within our nation, a race of superb physical contenders.

"Conspicuous as this race of athletes becomes in a magnified international meet like the Olympics, and greatly as the triumphs of our heroes thrill us, we should not overlook the fact . . . that physical prowess has not yet been passed around to those young people who need it most. And these are the vast majority."[5]

Taking the physical giant and making a finished athlete of him exemplifies the splendid teaching skill of our coaches. Indeed, some have claimed, and not without reason, that the finest and most intensive instruction in the whole school takes place on the athletic field. But intensive training for the few to the exclusion of proper attention to those in greater need of physical activity is not a justifiable procedure. The way to make the work educative is to meet the needs of all. The Albany recreation program[6] has been dedicated to a policy of "correcting in so far as it may be humanly possible the educational malpractice of eliminating, through activity, the unskilled to make room for the skilled. If we must have champions, let us develop them from the field of equal opportunity in activity for each and every individual instead of through the traditional procedure now in vogue, but justifiably criticized by educational authorities as being unsound and not serving those who need it most."

3 Leonard, F. E., and McKenzie, R. T. History of Physical Education, Lea and Febiger, Philadelphia, 1923, p. 288.

4 Journal of Education, September, 1932.

5 The author goes on to say that "we are not, as a nation of adults, habituated to games or bodily exercise" as a result of the stress put on the specialization in athletics.

6 Playground Manual of Albany Recreation Department, 1932.

Teaching of the so-called academic subjects has gone far ahead of instruction in physical education. In the schoolroom the program is at present being adjusted to the needs of the individual child. *To keep step, physical education must likewise develop a program designed to meet the needs of individual pupils* of (1) the restricted group, who have hernia or defective hearts; (2) those with postural defects; and (3) those whose general power or physical fitness is low and who need, as a result, close supervision and special exercises.

It is not our purpose here to discuss at length the methods to be used for determining who shall take special "corrective" work. Health examinations, with particular attention to posture, and physical fitness tests, will yield the information necessary for the division of the "sheep from the goats." Those needing specific work should, of course, get it; the others should be permitted to elect any wholesome activity they desire. In building our physical education plants, we should provide spacious and well-equipped corrective exercise rooms for the teaching of special activities, as well as extensive play spaces for the accommodation of those engaging in games and sports.

Health should be the first objective of the teacher of physical activities as well as of the general educator. Neither the teacher nor the parent has done his full duty to children so far as health and physical development are concerned, for the present type of physical education has not met the needs of individuals with respect to proper body development. The problem is primarily one of school administration.

CORRECTIVE AND DEVELOPMENTAL ACTIVITIES FOR GIRLS

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There is a wide difference of opinion regarding the place of corrective work in the physical education program. Some schools seem to ignore it altogether, while others make it the major objective. Miss Dobbins presents some of the reasons for an emphasis upon corrective technique.

I

FAULTY body mechanics are so prevalent that a sound physical education program must be built on teaching the child how to grow. Children are like young trees which the wind, or just lowered vitality, has caused to deviate from a straight upright growth. If this unsightly curve can be corrected before the trunk loses the flexibility and educability of youth, the tree will grow to its normal stateliness.

The old type high school physical education program which exercised heterogeneous muscle groups for increased circulation and respiration, and which gave all pupils a scanty knowledge of a few big team games and some intangible concomitants in sportsmanship, courtesy, etc., is past. If the school committee was not suf-

ficiently trained in proper school procedures to see the farce of aligning such an orgnization, or rather, lack of it, with education, the depression has done or will do so.

What is physical education for girls doing for those children who need help because they are physically below par? They are starting life with remedial handicaps. Can we prove with silhouettographs, pedographs, physical fitness tests, and even academic grades that we have put them on scratch or, at least, decreased the handicap?

To establish an efficient program depends first upon classification by initial tests; and second, selling the idea to the principal and superintendent so that all faculty members will be hired to lead some sport in addition to their academic program. In advancing this proposal one should stress the outstanding work of Germany, done undoubtedly on borrowed money, in an effort to build the populace to the health ideal in achieving their destiny—whatever that may be. In Germany the classroom teacher is delegated to leadership in all physical activities even to the extent of conducting three-day hikes through the countryside and even into the territory of neighboring countries.

One of the easiest and most richly rewarded contacts is to interest the prominent citizens and clubs in a program of betterment for their children.

II

Individual Physical Education, to use the newer and broader term, generally includes — in high school and college — two phases of correction. First, postural defects. Faulty anterio-posterior curves; flexible and structural scoliosis; pronated and weak feet; general lack of coordination. Second, functional inefficiencies as cardiac weakness; sluggish respiration and circulation; excessive fatigue and general debility; abdominal ptosis; menstrual disorders and constipation.

To group these disorders in classes of five or six is ideal, but for the great majority of physical education teachers, working with an overloaded and under-spaced program, perhaps all pupils except those falling in the individual physical education group should be excused from gymnasium work and continue their recreation and education through physical activity by participation in a large sports program of developmental activities. These activities must be chosen primarily with an eye to their inherent qualities for educability in body mechanics.

Swimming is probably the finest all-around muscle coordinator we have, as well as possessing all the wanted psychological qualities which insure mental and physical growth. If the school has no pool, arrangements may be made to use the neighboring Y. W. C. A. during the morning hours.

Dancing, both natural and tap, are excellent body builders. Moreover, dancing is the source from which all art springs in the human being, just as architecture is the source of those arts flourishing outside the being. In the words of Havelock Ellis, dancing is "a supreme manifestation of physical life and a supreme symbol of spiritual." Dancing gives an outlet and a tool for instilling girls with the charm of carriage and motion that comes from the perfectly coordinated

muscles resulting from such training.

Skating will develop the body mechanics until the skater is a living poem of balance; rhythm which fascinates and stimulates the body and elevates the soul. Some member of the school faculty may be an enthusiastic and proficient skater who can take the group in an after-school period.

Fencing, one of the most artistocratic developmental activities of all times, is never the proficiency of the flat-footed, poorly coordinated body.

Horseback riding, tennis, and *golf* all fall in this class, and may not constitute as expensive a program as the one now carried.

III

During the spring and fall seasons, when indoor corrective work is on the wane, the remedial classes will engage in those sports which contribute the most corrective activity, as swimming, archery, bowling, shuffle-board and rowing. Volley ball is probably the most highly developmental team game with the least undesirable qualities. Body contact is minimized and the major effort is of a stretching nature. Basketball, as well as soccer and hockey, may be utilized to a limited degree, but as body developers, they require reservoirs of energy and unless the enthusiasm of the child is controlled, fatigue offsets any desirable developmental effects.

The success of the corrective program depends to a very large extent upon the qualifications of the teacher. Stated briefly — she must be blessed with the doctor instinct, the desire to heal; she must be enthusiastic and possess a cheerful and never-say-die disposition; she must abound in sympathy and patience, trustworthiness and perseverance; she must be the essence of cleanliness, and exemplify the ideal of correct posture; she must possess a thorough knowledge of her subject, and an eagerness to learn more. She must, above all else, have the personality to rise above the physiological and psychological lassitude of the student.

IV

The silhouetteograph and pedograph are the first motivators of interest— "Seeing is believing." A graph of any kind is more convincing and interesting than a worded description. It stimulates curiosity, hence the preponderance of pictures in the primary readers.

With pupils of high school age, it is possible to explain carefully what the results should be. The girl must understand that she is working, not for snap or form, but to develop a certain set of muscles in her own body.

The foundation of corrective work is concentration upon localized muscle groups for voluntary contraction. This voluntary muscle control requires concentrated attention to develop new neuro-muscular coordinations.

V

The most common defect to be corrected is that of exaggerated anterio-posterior curves or habitual poor posture resulting from rapid skeletal growth, ignorance of body mechanics, or lassitude resulting from poor health.

Treatment of the rapid growth type assists the pupil in developing the muscular tone that will enable the skeleton to be maintained in its normal alignment. However, the posture

resulting from poor health and over-fatigue is a vicious circle. During the growth spurt, poor health habits have undermined the body and resulting fatigue and poor posture combined with a continuation of these faulty habits mean re-education in behavior before correction of posture can be attempted. One of the best indices of the health habits of a girl is to survey with her, in private conference, her activities over the last twenty-four hours — her hours and conditions of sleep, composition of her breakfast, when eaten, hours of study, number of classes, lunch, recreation, etc.

Cases of incorrect posture will probably embrace the following characteristics:— feet turned outward, knees hyperextended and rotated inward, pelvis tilted up in back and down in front with consequent exaggerated lumbar curve, strained sacroiliac joint and relaxed abdominal wall with organs sagging out of place, chest lowered, lungs compressed and costal angle narrowed.

The lateral curves of the spine are —postural or functional referring to the simplest form of scoliosis. Structural or organic scoliosis is the more serious condition and means that structural changes have actually taken place in the bones and tissues. This often results from a functional scoliosis which was allowed to persist without treatment. Therefore, it is important for the individual gymnastics teacher to correct all cases of functional scoliosis.

Structural scoliosis includes varying degrees of severity from a slight flexible curve with little alteration of body symmetry, through diversified stages, to a rigid curve with marked changes of contour and extreme deformity. Only the medical man has the skill, apparatus and right to accept the responsibility of treating advanced structural cases.

In treating both lateral and anterio-posterior curves, the teacher should aim first to improve general health conditions, to equalize flexibility, to strengthen muscles and to readjust muscular control.

A large and varied repertoire of exercises and activities is not essential. The individual gymnastics teacher owes herself several visits to well-known postural clinics to be convinced of this point.

VI

Each student should have a card of individual exercises to be done in the gym and at home. The first move the pupil makes upon reaching the gym is to procure her card from the file. If her allotment of exercises exceeds eight in number the chances are they will seldom be done with conviction and concentration and will never be done outside of the gym period. The exercises, of course, are simple and therefore easily remembered and correctly executed with slow and deliberate effort.

A large group will be composed of pupils suffering from weakened or fallen arches and still another group from functional disorders, as dysmenorrhea and constipation. Whatever the difficulty may be, we know that all the groups have one common fault, ignorance of proper body mechanics. Therefore, the composition of the class does not change the opening exercises. The correction of all postural difficulties is dependent upon early control

of the base; nothing can be correctly aligned where the foundation is off plumb. The tilt of the pelvis, which is the base, is crucial and success depends upon control of the abdominal muscles. Once the abdominal group is strengthened and made subservient to the will of the owner, the pelvis will be held correctly, and the diaphragm, the piston of the body, brought up where it belongs, increasing both the thoracic and abdominal cavities, so that both groups of organs function more efficiently.

A CONSIDERATION OF THE FUNDAMENTAL DIFFERENCES BETWEEN BOYS AND GIRLS AS THEY AFFECT THE GIRLS' PROGRAM OF PHYSICAL EDUCATION

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Girls playing boys' games under the boys' rules, with or without the added feature of a man coach, always means that for most of the girls of the school participation in physical activities is limited to buying tickets to the event and cheering for our team. Professor Lee would have team games for girls for the sake of the educational values.

THE fundamental differences between boys and girls frequently escape the notice of school men and in many instances there occurs a real misadventure in program planning. Such is the case when, in drafting the physical education program, the same educational yard stick is applied to both boys and girls. There is a special physical education yard stick for girls, a yard stick standardized after a study of their needs. Would that it were such a material thing that it were registered in the United States Bureau of Standards so that every superintendent might have a counterpart by which he could compute the approach towards the ideal of the physical education program for his girls!

PHYSICAL DIFFERENCES

In a study made over a period of years of the "peculiar nature of the female," especially in relation to her participation in athletics such as were originated for men, an investigator found unfavorable effects upon the thyroid gland, in addition to pelvic changes resulting in a modification of menstrual flow which would, as he believed, involve diminution of productivity. He concluded that after puberty girls should not participate in an athletic program similar to that of boys.[1]

Other authorities on this subject tell us:

> The pelvis of the female is much broader after adolescence, which gives to the femur a marked obliquity. This mechanical disadvantage interferes with the running ability of the girl. . . . It should be quite clear, . . . that the profound changes in the pelvis require modification of the program in physical education for girls. What has been used with boys will not suffice for girls after the onset of puberty. Complete development of the pelvis in women does not

1 E. H. Arnold, "Athletics for Women," "Mind and Body," XXI, January, 1924, pp. 114-22.

occur until "well into the twenties" and this prolonged period of developmental change from twelve years to twenty-five suggests that girls be taught activities that will not exert extreme muscular pull upon the pelvic region. This is of significance for maternity.[2]

The care of the physical mechanism of the girl is so essential to the welfare of the girl herself and to the race, that risks which involve the possibility of strain are very unwise and altogether unnecessary. Severe strain of any kind is not, as a rule, regarded seriously enough. After intense or prolonged strain or fatigue, the organism seldom returns to its former degree of strength and vitality.[3]

Physically women are not adapted by anatomical structure or physiological function to the intense forms of muscular activity and strain which are fundamental and normal in athletics as developed and carried on for boys and men.[4]

Another authority maintains that physical activities which make heavy demands upon organic vitality are not suitable for the rank and file of girls and that the dangers from collision, violent contact, and falling are more serious for the girl than for the boy. She warns of pelvic disturbances, brought on by unwise athletic participation, from which the girl may never recover. She states that fighting features of physical activities have lead to "the development of aggressive characteristics that added nothing of charm and usefulness, and were not in harmony with the best traditions of the sex."[5]

Instinctive Urge Differences

We must recognize the fact that boys and girls are socially and emotionally different. Through the ages the boy, the man, has felt the urge for physical combat and with the need greatly removed athletics offer a natural release to this urge.

From a study made by M'Gee and Croswell[6] of the play preferences of eighteen thousand children we learn that boys are more interested in rivalry and cooperative (team) games than in any other types throughout the entire range of ages from six to eighteen years. But this is not true of girls. From the sixth to thirteenth years they prefer the hide and seek type of games and after that they give rivalry games their first choice. Never do team games rate high at any age level with girls. Although many girls are intensely interested in such games, this study gives indisputable evidence of the preference of the great rank and file of girls.

Competitive sports tend to develop behavior patterns which are contrary to feminine nature. Natural feminine health and attractiveness whether physical, emotional or social, certainly are impaired if not destroyed by the belligerent attitudes and competitive spirit the development of which intense activity inevitably fosters. One has only to postulate a female Roosevelt to reduce to absurdity the claims of those who foster the masculinization of girls. Neither men or any normal woman would embrace or willingly tolerate any tendency toward such an eventuality, yet competi-

2 Jesse F. Williams, "Principles of Physical Education, W. B. Saunders Company, Philadelphia, 1928, pp. 96-98.
3 Florence A. Somers, "Principles of Women's Athletics," A. S. Barnes and Company, New York, 1930, p. 80.
4 Frederick Rand Rogers, "Olympics for Girls," "School and Society," XXX, August 10, 1929, pp. 190-94.
5 J. Anna Norris, "Basketball-Girls' Rules," "Child Health Magazine," American Child Health Association, New York City, December, 1924.
6 M. V. O'Shea, "The Child: His Nature and His Needs," The Children's Foundation, New York City, 1924, pp. 64-65.

tive athletics will bring it about more surely than any other human behavior. . . . Games and sports for girls, by all means, of recreative types, which develop physical, psychic and social health and charm, but inter-school competition in basketball, baseball, track and field sports, and Olympic competition of whatever nature: no![7]

Chief Considerations for the Girls' Program

All activities of the program of physical education for girls we should adapt to the girl's physical, social, and emotional make-up. This means adequate physical examinations and women teachers — women who can interpret the findings on an examination blank — women who understand girl psychology and know the fundamentals of the physiology and kinesiology of exercise, as well as the tenets of healthful living—women who not only know these things but who exercise good judgment in the application of these principles towards the attainment of correct objectives. Certain important objectives are outlined in the following statement:

Athletics for girls? Certainly! It is one of the basic phases of education. How much? Just as much as the organic examination indicates will give benefit to the individual. When? Throughout life. Where? Anywhere, where results as indicated above can be produced. As a matter of practical administration this means trained women physical directors, capable of classifying children and adapting activities to their needs. It means an intra-school program which involves every girl in the institution. It involves the elimination of gate receipts, because gate receipts merely start a vicious circle. It involves the elimination of pyramiding games which involve city championships. It practically means the elimination of the spectator, who, after all, represents the "deep-dyed villain of this drama." Athletics cannot be run both as a financial proposition and as an educational proposition. . . .[8]

Competition for Girls

As a heritage from my college days I have an intercollegiate athletic past! From my high school days I have a bad athletic record for I played on a basketball team that played against boys. From my early teaching days I have brought to my saner years of maturity the memories of many ill-advised experiences as a professional referee of numerous inter-school basketball games for girls, traveling rather extensively over one of our Middle Western states to carry on those duties. I feel that I know the inter-school competition game for girls from all angles. Years of experience with it leaves me not one word to say in its favor and I stoutly maintain that inter-school competition for girls is educationally unsound. Do not misunderstand me and the great army of women with whom I work in the Women's Division of The National Amateur Athletic Federation, the Women's Athletic Section of The American Physical Education Association and the many State Leagues for Girls, when we denounce inter-school competition. We do indeed recognize the values of *opposition* and we desire those values for all girls and women. It is because we desire them so much for all that we cry out against the specialized training of the few such as invariably occurs when

[7] Frederick Rand Rogers, Op. cit., pp. 190-94.
[8] Jay B. Nash, "Athletics for Girls," "North American Review," CCXXV, January, 1928, pp. 99-114.

any school begins to think in terms of a winning team.

Opposition to inter-school competition for girls is voiced in published records by many groups such as the National Recreation Association;[9] Women's Division, National Amateur Athletic Federation;[10] Directors of Physical Education for Women in Colleges and Universities;[11, 12] The North Carolina High School Girls Athletic Association;[13] The Ohio Conference of Superintendents, Principals, Coaches and Physical Directors;[14] The Athletic Conference of American College Women;[15] State League of High School Girls' Athletic Associations;[16, 17] The Pennsylvania Interscholastic Athletic Association;[18] and The Society of State Directors of Physical Education.[19]

The names of individuals whose pronouncements of disapproval may be found in print would fill a long list. To those interested to investigate such statements I recommend *Bulletin Number 24* of The Carnegie Foundation for the Advancement of Teaching;[20] *Women and Athletics*[21] and the recent report of The Committee of the American Physical Education Association on Athletics for Girls and Women.[22]

Conclusion

In our programs let us have team games for girls for the sake of the educational values inherent in them but let us place our major emphasis where the instinctive urge of the great rank and file of girls places it—on the program of individual activities. Let those who are physically fit for it play basketball (a sane game however with girls' rules and a woman coach), but let us be sure that every girl leaves the public schools equipped with such skills that she may enter into an adult life made joyous through her ability to engage freely in healthful recreational activities.

Because of the particular physical conformation and emotional makeup of girls let us promote for them an athletic program free from emotionalism, free from intense competition, free from heart and pelvic strain, free

9 "Proceedings," Playground Association of America, New York City, 1908, pp. 329-30.
10 "Platform," Women's Division, National Amateur Athletic Federation, 370 Seventh Avenue, New York City.
11 The Society of Directors of Physical Education for Women in Colleges and Universities, "Resolutions," "Journal of Health and Physical Education," III, Number 7, September, 1932, pp. 49-50.
12 Mabel Lee, "The Case for and Against Intercollegiate Athletics for Women and the Situation Since 1923," "Research Quarterly," II, Number 2, April, 1932, pp. 93-127.
13 Mary Morrow, "Athletic Association of North Carolina High School Girls," "Peabody Journal of Education," IV, November, 1926, pp. 136-41.
14 Helen Coops, "A Conference on Problems of Girls Athletics," "American Physical Education Review," XXXI, May, 1926, pp. 846-48.
15 Blanche Trilling, "Conference of Women's Athletic Associations," "Mind and Body," XXIV, June, 1917, pp. 194-195.
16 Illinois State League of High School Girls' Athletic Associations, "Constitution, Vera Kraft, Manager, 11 South LaSalle St., Chicago.
17 Nebraska State League of High School Girls' Athletic Associations, "Constitution," President, Mrs. A. Wohlford, Gresham, Nebraska.
18 Mary Hefferman, "Report of Advisory Committee on Athletics of High School Girls," "American Physical Education Review," XXXIII, April and May, 1928, pp. 254-60, 308-16.
19 James F. Rogers, "Report of a Conference of State Directors of Physical Education in 1924 in Problems in Physical Education," "Physical Education Series," United States Bureau of Education, Washington, January, 1925, Number 5.
20 W. Carson Ryan, Jr., "Athletics for Girls and Women," "The Literature of American School and College Athletics," The Carnegie Foundation for the Advancement of Teaching, Bulletin No. 24, 1929.
21 Women's Division of the National Amateur Athletic Federation, "Women and Athletics," A. S. Barnes and Company, New York City, 1930.
22 Committee of the American Physical Education Association, "Monograph on Athletics for Girls and Women," "Research Qaurterly," III, Number 3, October, 1932, pp. 79-110.

from all attempts to imitate the boys. This advice holds for the elementary school age (the fatigue years), as well as for the secondary school age. Let us keep the girls out of spectator athletics, keep them out of the boy's realm of sports. Let us build for them a sports realm of their own, a realm of Play Days, founded on physical safeguards and moderation.

THE FUTURE OF COACHING IN SECONDARY SCHOOLS

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It is so easy to measure the value of a high school coach if the winning of games or the size of the gate receipts are taken as criteria of success. Dr. Harmon would introduce educational criteria that are far more difficult to apply.

THE future of coaching in secondary schools depends upon an increase in the development of sane and educational attitudes towards athletics upon the part of coaches and educational administrators. The greatest need in the physical education program development at this time is that interscholastic and intercollegiate athletics be made an educational part of the educational program. It is the purpose of this article to suggest methods for this educational procedure.

Early in the present century, educational administrators awoke to the fact that an extra-curricular activity, namely athletics, was becoming so popular that it was being taken over in many cases by undesirable teachers in the community. A reorganization which placed the boys under the guidance of regular teachers was completed in about fifteen years. This reorganization relegated the former coaches to the status now referred to as "drug store coaches."

With teacher-coaches in charge of games, the boys seemed quite safe educationally. But another change or development was under way before the reorganization just suggested was complete. The teachers of games saw opportunities for great service through this contact with boys. A great educator has said, "School coaches have a greater opportunity for service to the youth of our country than men in any other profession, not barring the ministry." The same teachers saw a need for more knowledge of best methods in teaching games and handling boys. They realized a need for training in biology, bacteriology, anatomy, physiology and psychology. These interests lead to specialization — to full-time work in physical education and athletics. The professional secondary school coach had now become a reality.

As the professional coach or physical educator gave more time to best methods of teaching, he also gave more time to interesting the community in the games. This led to more and more interest in winning championships. The coach who did not win most of the games, often for reasons uncontrolled by the best teacher of

games, was asked to resign, and another coach hired who had "developed" a winner. Tenure in coaching positions became very uncertain. In many situations the coach became willing to forget education if it would help in winning games.

Not only the public, but many educators, overlooked or forgot the educational possibilities in school athletics. A college president recently said to the writer, "I can see no educational value in athletics. I consider intercollegiate athletics to be justified only in their contribution to leisure time and in giving desirable publicity to the school." As high school athletic associations were organized, for reasons entirely proper and consistent with good administrative practice in education, the principal was made the acceptable representative in association meetings where athletic policies were set up. The writer has had contact with hundreds of high school coaches who had a feeling of responsibility only for winning games, apparently assuming that his principal would be responsible for the education of the boys. In many cases this situation leads to a spirit of "getting by" the principal. The same attitude is transferred to the boys upon the teams.

Now, the writer wishes to suggest that the school coaching profession has at last become an "adult" and has merged its interests with those of the teaching profession of physical education. Consequently, *more responsibility should be placed upon the coach for education and less responsibility for winning games.* In this procedure the coach or teacher of physical activities, now one and the same man, should be held responsible both for setting up and for carrying out athletic policies. The principal and superintendent should review and approve all policies before they are put into operation and check upon the efficiency of the teacher who carries them out.

It is evident to the writer that men who are now teaching schoolboys how to play are, as a group, men of high ideals with an educational philosophy of athletics. Within the last year, the writer carried on a research study in which he set up standards for measuring the efficiency of a high school athletic program. Fifty-eight leading school athletic administrators, representing most of the states, cooperated in the study, giving their judgment of the relative value of 130 phases of the school athletic programs. When we had learned the composite judgment of this group of leaders, we were able to arrive at the following definite conclusions as representative of their judgment:[1]

4. In measuring the efficiency of a high school athletic department, the proper procedure in the daily practice of the major sports is of more importance than the way in which the game is conducted, or the winning or losing of the game.

5. The personal contact of the coach with the players and the community is of more importance than the winning or losing of the games.

6. The sanitation of, and mental hygiene in the dressing room is of more importance than the winning of games.

7. The proper business management of athletics is of more importance than the winning of games.

8. The time allotment to football

1 Conclusions 1, 2 and 3 pertain to the reliability of the report on which the following statements are based.

practice is of more importance than the percentage of games won.

9. The time allotment to basketball practice is of more importance than the percentage of games won.

10. The time allotment to baseball practice is of more importance than the percentage of games won.

11. The proper division of the daily practice time in football to fundamentals, scrimmage, signal practice, and lecture is of more importance than the percentage of games won.

12. The proper division of the daily practice time in basketball to fundamentals, scrimmage, signal practice, and lecture is of more importance than the percentage of games won.

13. The proper division of the daily practice time in baseball to fundamentals, practice game, signals, and lecture is of more importance than the percentage of games won.

14. The morale of the team is of more importance than the percentage of games won.

15. The coaches' methods of teaching the game are of more importance than the percentage of games won.

16. The attitude of the coach during the game is of more importance than the percentage of games won.

17. It is of more importance that a coach have four or five individual conferences with every member of his team during the season than that the team win games.

18. It is of more importance that the coach make many social and civic contacts in the community than that his teams win games.

19. It is of more importance that the coach be very active in extra-curricular activities, other than athletics, than that his teams win games.

20. It is of more importance that the dressing-room be cleaned perfectly after every day's use than that the team win games.[2]

These conclusions seem sufficient to indicate that we have a leadership in school athletics that may be depended upon to develop and maintain higher standards, educationally, than we have yet achieved in school athletics. These leaders need only the moral support of their principals and superintendents.

Assuming that the physical educator is free to set up educational methods, supported at all times by his principal and superintendent, the writer would suggest that the best educational methods in the gymnasium or upon the athletic field are no different from the best methods in any classroom. It is often said that an educated man is one who can and does think. Habits of thinking while actively participating in a game are habits that are just as certain to be transferred to the classroom and everyday life, as the certainty of a transfer of training from the classroom situation to everyday life. Coaches of experience are aware that, other things being equal, the intelligent boy is the best athlete. How, then, may we best develop habits in the experience of athletes that will serve them in experiences of the classroom, in the game, or in every-day life?

Coaches of basketball, for example, who try to assist the boys from the side-lines during the game are likely to be uninformed concerning the laws of learning. Learning cannot take place upon the physiological, habit, sensory, or mental level without activity. It follows that boys learn most in games by being placed in situations in which they must solve the problems confronting them in the game, instead of serving as marionettes controlled by a sideline coach. (It is important to

[2] Harmon, John M., "Methods of Procedure in the City Comprehensive School Health and Physical Education Survey," Unpublished doctor's thesis, Indiana University, 1932.

remember that the rules and codes set up for our major games are disregarded by those coaches who coach from the sidelines in any way.) It may be expected that in a period of development during some games, the judgment of the coach, developed in experience, would enable him to make substitutions that might help the boys win some games they would otherwise lose. We should not be concerned about these games lost by the boys if the experience serves a purpose in the process of education, and if the program is organized for the purpose of education. Furthermore, the policy of "hands-off" upon the part of the coach will, over a period of four or more years, educate the boys to win more games in competition with teams that are under the rigid control of coaches who disregard rules and codes.

There are many variations of the method of teaching suggested. The principles suggested in these methods should be followed and should be as valuable upon practice days as during the hour of the game. The procedure in teaching a definite play in any game should be one that leads the players to suggest as much of the procedure as they are able to see after the coach indicates the situation.

In conclusion, the most sane attitude toward athletics is that we consider the athletic program to be an educational program. The most widely accepted objectives of secondary education are objectives that may be reached as readily through a physical education program, including interschool athletics, as through a teaching program in any other one subject.

Coaches should be given the responsibility for setting up the objectives and indicating the methods of procedure in their department. This is more often the practice in other departments.

Coaches who are promoting an educational program in athletics should have the whole-hearted support of their superiors, regardless of the percentage of games won.

A bright future for coaching in the secondary schools may be expected only through the use of educational methods and the maintaining of an educational philosophy of athletics. Any other methods and philosophy can lead only to an uncertain future including uncertain tenure.

SELF EDUCATION THROUGH PHYSICAL ACTIVITIES

Some Experiences in Player Controlled Activities

Laurence S. Hill
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HUXLEY, contemporary of Darwin, defines an educated man as one "who has been so trained in youth that his body is the ready servant of his will, and does with ease and pleasure all the work that, as a mechanism, it is capable of; whose intellect is a clear, cold, logic engine, with all its parts of equal strength and in smooth working order; whose mind is stored with a knowledge of the great and fundamental truths of Nature and of the laws of her operations; one who is full of life and fire, but whose passions are trained to come to heel by a vigorous will, the servant of a tender conscience; who has learned to love all beauty, whether of Nature or of art, to hate all vileness, and to respect others as himself."

It is obvious that the great triumvirate—the body, the mind, the spirit—compose an essential unity, a combination which should normally work with a smoothness out-rivalling anything that practical mechanics or professional technocracy has developed. The physical, the mental and the controlling powers, are those which form the raw material with which the young man or the young woman must work to make of themselves an educated individual. Their coordination, as well as their development, forms one of the great and conscious aims of human existence; finding its full fruit in a "tender conscience" which loves beauty, hates vileness and loves others.

Self education means nothing more or less than the development of the powers and characteristics referred to above, by the individual under the impetus of his own will. This development calls for independent action in the development of and the use of these powers. Psychology provides a valid basis for the statement that mental stimuli result in physical expression either inhibited or perfected. The musician, listening to music, may consciously or unconsciously keep time, or his vocal cords or fingers may feel the effect of the stimuli. The boy at play receives this mental stimuli through situations arising in his games which result in spontaneous physical expressions and actions.

Independent action of both mind and body is the end point of educational development. Coordination of the mental and physical powers is a more desirable accomplishment. The student's control of physical powers cannot develop independently of the simultaneous development of his mental ability. Physical action is the most fundamental and primitive of human developments. Opportunities must be offered, therefore, for the development of independent action of both mental and physical powers through physical activity during the

formative years of youth. He must have opportunities for modifying his own behavior.

The entire trend of modern education is the development of initiative among individuals. Pupils are guided rather than led. Opportunities are given them for making choices; wise selections ensure gratification, while mistakes give a feeling of dissatisfaction and desire for future success. The following opinion, rendered by Dr. George F. Arps, Dean of the College of Education at the Ohio State University, a noted American educator and psychologist, shows the value of leadership in athletics:

"The present practice in competitive sports, whether in the secondary schools or colleges, does not conform to the best principles of education. Initiative, resourcefulness, responsibility, and other highly desirable character traits cannot be developed in the youth when decisions and directions emanate from the coaches, that is from without. Decisions from within from the boys themselves, alone, constitute the indispensable psychological conditions for the development of all those traits which compose the main objective of athletic contests. When alternative procedure, choice of action, rest with the coaches, the players behave as directed, from without, rather than as a consequence of their own thinking. Under these circumstances, growth in resourcefulness and in responsibility is seriously curtailed. The hand of the teacher should be entirely withdrawn in every contest and the players, therefore, left upon their own resources and responsibility. Intelligent self-direction rather than semi-automaton behavior would follow.

"If players were left to their own devices, the teaching prior to contests would be essentially modified. Instead of imposing plays and authoritatively giving directions, the coach (teacher) would direct instruction toward greater self-expression and self-dependence on the part of the student. Physical Education would thus become genuinely educative."[1]

This principle of allowing boys to play their own athletic contests with no adult assistance is in complete conformity with the newest educational policies. The writer, while Director of Physical Education in the city of Albany, New York, followed this procedure for many years among boys of elementary and junior high school age before player control was publicly advocated as a general regulation in state wide athletic competition, and for four years as Director of the Division of Physical Education at Ithaca College. During this time a number of examples of splendid leadership as evidenced by acts of students running their own activities have even influenced the curriculum at Ithaca College. Perhaps, it might be wise to state some incidents of leadership developed through student controlled games.

In Albany high school three successful basketball teams, guided by captains, rose to highly successful seasons. Early in the season the captain, unaccustomed to authority, would not fare too well. He would make mistakes; he would be timid about his decisions. But, once he found him-

1 From Rogers, F. R., "The Amateur Spirit in Scholastic Games and Sports." C. F. Williams & Sons, Albany.

self through wise direction and experience, he would show unusual leadership qualities. One captain in a game for the state championship made decisions that allowed his team to rally and win the final game for the state title. A coach would have spoiled the picture entirely.

In football a mediocre captain grew to great heights in an important game when he led his team to a no-score contest. The opposing team had weight advantage, two coaches on the bench, a knowledge through long scouting of all formations and were even familiar with certain signals. The odds all against them, the boys, on their own initiative, scored more than a tie; theirs was a real victory.

A baseball captain learned to give signals, plays, make substitutions. His knowledge of baseball increased extensively. His teams lost only one game and won a championship.

At this high school the entire student body became imbued with the idea that the teams were theirs. They saw no signs of a coach; yet they realized that their own contemporaries were doing something big. The interest of the school body grew daily. In following their basketball team through a successful season, they had a desire to show their support by wearing a small placard bearing a slogan. A committee was formed to originate a suitable phrase. Instead of accepting "Beat Somebody" the tickets bore the caption "Good Luck, A——." Surely this school population had learned something worth while through their player-controlled activities.

At Ithaca College, the use of this principle forms a strong factor in leadership training so necessary for a teacher's poise. The power to think under the stress of excitement and to make decisions is akin to the necessary training of a new teacher facing a class and giving lectures on commands. The football captains have evidenced splendid ability along the line of leadership. Captains in basketball have so conducted their own activities that time after time, minus the advice of any outside member of the faculty they have worked out their own salvation to the result of winning several contests. Strange as it may seem, not only one boy but all of the boys became imbued with this confidence and ability to lead. And when one captain leaves a contest, another, appointed by him, carries on. It really is splendid to see this leadership develop. In baseball, these boys have competed with unusual success against teams run by coaches.

The entire student body is affected favorably by this student controlled method of learning. True enough, many arguments are found to show that games might be lost. But the "proof of the pudding is in the eating" and no one who is open-minded can follow a year in school under this system without accepting the principle as a sound educational procedure. Having given this method of teaching independent action a thorough trial and having seen outstanding results in leadership accrue, it seems unlikely we should ever attempt the old method of pulling the strings. It requires a staff of sympathetic educational administrators, with broad vision, teaching ability and patience to accomplish desired objectives.

THE PLACE OF PLAY AND RECREATION IN THE COMMUNITY

ERNST HERMANN

DIRECTOR OF THE SARGENT SCHOOL OF PHYSICAL EDUCATION, BOSTON UNIVERSITY; AND SUPERINTENDENT OF PLAYGROUNDS, NEWTON, MASSACHUSETTS.

Since the tasks of home life no longer exist, so far as they apply to furnishing children with stimulating physical activities, the schools and play centers must take up the work if the children are not to suffer.

INTEREST, natural or spontaneous or developed, is not only a great educational force within each individual child or each mature person, but is also a great dynamic power for happy and successful living, for growth, for progress of the individual, as well as the group.

In childhood, interests are comparatively simple and not diversified. This simplifies our initial educational task, which is very fortunate for our present-day understanding of child psychology, and from the point of view of our present environment and equipment. Later childhood, the years from about five to twelve, is probably the greatest period for the development of the underlying or fundamental skills needed later on for vocational and avocational pursuits. During this period children have a great diversity of interests. They are still bent upon simple and individual activities. It is a period of rapid learning due to great powers of imitation and natural interests in physical tasks.

This period is an important period in the schools. It usually includes the first seven years. It is about half the time our children spend in elementary or secondary education.

In this question of the significance of skills developed during this period for later recreational interest, the present-day physical educator is aware that it involves both the fundamental or big muscles, as well as the accessory or small muscles. He further knows that it involves the integration and coordination of mind, character, senses, and muscles. Large muscle efficiency usually favors interest in some form of out-door activities which makes these activities so important from the point of view of health and physical education. Small muscle skills are useful in the stimulation of gentler forms of activities, such as the arts and crafts and other cultural pursuits. A wholesome combination of both forms is needed for the fullest enjoyment of life. Without such interest there can be, at best, only mere existence. Vocational training is a simple task when compared with avocational or recreational education. Schools must develop both large and small muscle skills.

If we can all agree that this period is the natural and most effective period for the development of fundamental skills, of sound mental habits, and of social integration, we can realize the significance of the need for more diversified physical education during the elementary school years. The home life of children up to modern times has usually furnished this important

education. The home cannot now provide it. The simple, fascinating tasks of home life in the past are not now available for the child. Formerly mother, father, brother, sister, and servant carried on a diversified home-life full of fascinating and interesting tasks. Neighborhood activities were a great help. All kinds of fascinating crafts were stimulating daily the interests and imitative powers of children. This was a fine type of physical, mental, and moral training. The schools must at least equal this former education. It probably can never do it entirely as well as the home used to do it, but if we can bring about an integration of the home and school, if we can develop different types of buildings, and acquire the necessary equipment, the school can make up much that is lost.

The schools must now seriously consider what has been advocated for at least twenty years; namely, a different type of school building, particularly for elementary grades, also a school building which can serve a wider purpose than the "three R's." Many of the social and recreational workers have worked on this problem and some progress has been made. The wider use of the school plan depends upon our ingenuity to develop a school building in which the formal activities of the school can be carried on indoors with the more informal activities of play and recreation. Play and recreation carried on in a school room in which concentrated, accurate thinking must be stimulated, the success of which depends upon orderly procedure, should not be tolerated. Wherever tried it has never proved satisfactory. Our aim must be to develop under one roof these two departments, easily accessible at all times to the school classes or the play group. As a whole it would be more successful to use the first floor for play and recreation and the second for education. There should be several fair-sized play rooms with a great variety of equipment and building materials. Surrounding the building there should be the out-door playground also thoroughly equipped and carefully maintained. The tendency toward architectural daintiness which can be observed in some of our more recent school buildings, particularly the junior high schools, should be avoided. Utility must always come first, but artistic setting should come in somewhere. However, the daintiness of our recent construction has put another severe, nervous handicap on our children. I believe that they need in every building some beauty to develop reverence for art, but the school building should become an attractive, useful home for the child in which he can express himself. He should not be under constant strain. Utility should determine the lay-out of the playground, the proper surface, the proper equipment, and the type of building. The whole should have such a landscape that it would stimulate the child's love for nature, and develop within him a respect for beauty and orderliness.

Besides the nervous strain which we inflict upon our children, who are after all in a more or less primitive state of development, these dainty buildings with their delicate colouring, expensive panelling, etc., from the point of view of care and maintenance, cost much money, and unless they are

maintained in the most orderly and effective manner they soon become the opposite of having a good influence. This holds true also with the out-door layout. Children naturally love beauty and flowers, and shrubs, and trees. For the relief of eye-strain, and the deadening of noise, landscaping is of great importance. The planning of the school building, and the planning of the playground for children and youths, an intricate problem today, can only be solved by specialists. Since play is now an important means in education, and because we must now make provisions for leisure time avocations, communities must also now offer recreational opportunities out of school, for the adult population.

Naturally the first purpose of the school should be the education of its children and of its youths. However, the great leisure time problems of the adult neighbors must be taken into consideration. If the school building has been planned for the dual purpose of schooling and recreation, it will solve our neighborhood needs better than separate buildings. The best interest of our children requires that their play, even after school hours, be directed by highly trained recreational leaders, and since schools of education are now turning out efficient teachers and play leaders, in one person, there is no reason why the school should not have many such persons on its staff.

Finally, I should like to point out the great need of providing resting places in both schools and playgrounds. This is as important as are the provisions for free play. There must be opportunities for "loafing" and for "day-dreaming." There is too much driving, and altogether too few chances for observations. The steady, oftentimes monotonous tasks of home life and farming, of some arts and crafts activities leave a chance for contemplation. This is a valuable phase of self-realization, and unless of a morbid nature, leads to renewed activity.

PHYSICAL EDUCATION AT LYNBROOK

JAMES J. CARTER

DIRECTOR OF HEALTH AND PHYSICAL EDUCATION
LYNBROOK PUBLIC SCHOOLS

FOR the past five years the physical education program of the Lynbrook Public Schools has been administered as described herein. It is not complete and changes are made as fast as conditions permit. We have tried to keep in mind the implications of large-muscle activities and to adopt specific educational objectives. Traditional routine of the past has been minimized or eliminated according to its value in meeting these objectives.

ELEMENTARY SCHOOL PROGRAM

The program in the elementary grades is handled by the classroom teachers, under the direction of a supervisor. Our material is developed through group meetings, the work mimeographed, and given to the teacher. In these lower grades we teach rhythms, which are fundamental to our folk dancing, and the "It" games, are played. Beginning at the sixth grade, where the classes are di-

vided according to sex, our teaching is done entirely by specialists in health and physical education. At this point we are developing skills, which are progressive, that enable the child to play team "We" games. Thus upon entering high school children are well grounded in the fundamentals of team games. Most of this article will be devoted to high school work for it is here that many of us lose the identity of our physical education program. We embark on a venture in athletic competition devoting most of our time to superior athletes and asking the majority to become spectators.

Secondary School Program

At this period in education child needs differ greatly. Our attempt has been to fit the program to the child instead of giving the same type of program for all. The following procedure has been adopted in the high school to carry out a program of physical education based on needs, capacity, and interests. Medical examination and P. F. I. (physical fitness) tests are used to determine these needs for classification into homogeneous groups, and also to measure the progress toward this goal of health and physical fitness.

From the results of these tests we classify our students into three groups. The upper third are called "A," the middle third "B," and the lower third "C." Health is a primary objective in all education, therefore we feel that this "C" group with physical deficiencies should receive first consideration. Accordingly they are assigned to classes which meet daily. This is placed on the student's schedule first and his other subjects fitted in around it. This ideal situation did not exist when this work was first started. The writer did, however, make divisions in the heterogeneous classes sent to the gymnasium, provided special work for those needing it, kept accurate records of improvement, and finally, "sold the idea" to superintendent, principal, and board of education. My principal is today as much interested in the improvement of students' physical fitness as he is in their scholastic improvement because we report the results of our measurements in the same terms as used in general education.

Programs for Subnormals

After the students report for classes a careful investigation is made by questionnaire; student, parent, nurse, school, and family physician cooperate in helping us to determine "the cause" of deficiencies. Many remedial defects are located in this way, and every effort is made to correct them as soon as possible. Surgeons, oculists, dentists, and orthopedic specialists have been consulted, in many cases without charge where parents were unable to pay for their services.

On alternate days the class meets in a room especially equipped for individual health training (corrective room). The other days a regular developmental type of program is given in the gymnasium. Still another room is provided for rest cases where students must rest one full period each day if they are unable to take the special work provided. Exercises are given for the correction of weak ankles and arches, constipation, obesity, menstrual disorders, posture, and other conditions which warrant our atten-

tion. In all this work we are guided by the school and family physicians.

Programs for Physically Normal Pupils

Groups "A" and "B" are permitted to elect activities which take place after regular school hours. Guidance is given in selecting these activities to provide types and amounts of activity which will produce desirable health and social outcomes. They include: baseball, tennis, golf, track, handball, bowling, horseback riding, basketball, hockey, skating (ice and roller), hiking, football, fencing, rowing, cycling, volley ball, wrestling, boxing and archery. We utilize outside facilities which we are able to bring more or less under the control of the school. Special rates for bowling, riding and golf are offered the students electing these activities. We have the usual number of varsity teams competing with neighboring schools. In our intramural program we use the Strength Index to equalize the physical powers of competing teams.

The Leaders Corps

For the most part these activities are handled by students of our "Leaders Corps." This group is composed of students above the ninth year. It was organized as follows:— Any student of the 10th-11th-or 12th year without a scholastic "condition" from the preceding semester, may make application for this honor group. The names are then submitted to the high school faculty for approval. All students who have shown capacity for leadership are elected to membership, and those lacking this quality are rejected. The duties of this group are numerous. They check attendance at different activity areas, make all arrangements for contests, schedules, officials, etc. in the various intramural leagues. Managers, captains, and assistants in varsity sports and other honor positions are open only to members of the Leaders Corps.

Pupil Comments

The following item is taken from a report submitted by a boy who "managed" intramural football. This boy loved football, but because of a cardiac condition he was forbidden to play, so we placed him in charge of this work. He arranged for games, etc., and was as happy as we could make him without letting him play:

"Throughout the series the boys exhibited remarkable spirit, often wishing to play double the ordinary time of a game. I knew the danger of this and would not permit it. None of the players was injured to any extent since they were playing against fellows of their own strength. This fact, along with good equipment, gave the players the self-confidence necessary for a good clean game of football. Players with the lower Strength Index displayed football skills against opponents of like Strength Indices which would have gone unnoticed if they had been playing against heavier, stronger boys. They were not cowered or afraid of being injured. Also, the heavier, stronger boys were not hindered by the fear that they might injure the lighter, weaker ones." Signed, *Herbert Parman.*

The following letter received last June is self-explanatory. This boy knows our program from participation. The hockey team mentioned, received only such guidance as seemed pertinent, and this came from me while in my office. I never saw the boys play, not because I was not in-

terested, the letter is sent in appreciation of my interest, but it was a different kind of interest.

Dear Mr. Carter:

One cannot analyze his emotions at a time like this, a week after graduation from high school, but it is with a sense of deepest gratitude that I wish to convey to you my appreciation of your guidance during my four years in school.

I sincerely trust that the reaction of high school pupils to your comprehensive physical education and intramural program, embodying such features as the Leaders Corps, will be as advantageous to them as it was to me. The championship ice hockey team which, in my opinion, was created by that spirit of self-reliance and independence fostered by you in the boys, is an attribute to your system.

As you will readily recall, we maintained a difficult schedule; playing at the Ice Palace in Brooklyn, the Colosium in the Bronx, Playland Casino at Rye and finally in that vertible elysium of amateurs, Madison Square Garden; losing only two games during the season. I would surely make a good salesman for your project (player-control) because I know the facts, causes and results in this most specific of instances. To tell the truth, I've been bitten and bitten hard by that pet theory or should I say philosophy of yours? Perhaps that is not adequate, it has advanced beyond theory. Since that day in Madison Square Garden, when we beat a team composed of the pick of Connecticut prep school stars by the score of 5-1, I have been firmly convinced of the efficacy of a group of students with a similarity of purpose. This outcome is the result, as you have said, "Freedom to students to choose and conduct activities in which they are interested."

Words cannot express the satisfaction, the feeling of completeness and pride that I experienced with each succeeding game, as one of the members of the hockey team. It was an emotion akin to that of a painter's upon completion of a picture, the pride of creative effort. We started with nothing and moulded a championship hockey team, despite the fact that we had no coach, no paid advisor. Ours was the joy of accomplishment each time we played we realized the difficulty we had had in scheduling the game; the numerous letters it had taken to establish connections with the skating rinks and various schools, the disappointments we experienced upon coming to your office every morning for mail pertaining to possible bookings. The memories of the contacts established and friendships made, during those winter months, will remain with me always.

I suppose, you realize by now that as a correspondent I'm not so "Hot." I start by thanking you and finish by telling you how noble we were! Seriously, Mr. Carter, I really believe your program has that "extra something," so sorely needed in many schools today. It does not take any stretch of the imagination to say that in the near future it will have to be seriously considered by every secondary school in the state.

Wishing you the best of luck, I remain,

Your friend,

—— ——

NEW PUBLIC SCHOOL PHYSICAL EDUCATION PROCEDURES IN QUINCY, MASSACHUSETTS

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QUINCY PUBLIC SCHOOLS

"What I should like to emphasize more than any other thing during the year 1930 is more attention to the individual. What is required is a system of education which shall encourage boys and girls to teach themselves; a system calculated to foster the child's curiosity; to make the desire for knowledge an habitual desire; and above all to familiarize each child with the best methods of acquiring it by his own efforts."

THE above statement from the annual report of Superintendent James N. Muir for the year 1929 is the keynote around which this new program of health and physical education is built, i.e. individual needs.

In the fall of 1931, a specialist in school health administration was invited to survey the physical education work in the Quincy public schools. Following this survey a report with recommendations was made to the Quincy School Committee and adopted to start in the fall of 1932.

First steps toward the reorganization were taken by coordinating services of physicians, nurses, physical educators and others in order that complete examinations might be made to determine individual needs.

The tests actually given include the following:

(a) Medical examinations — to determine the need for modified programs to remedy heart defects, digestive deficiencies, hernia, malnutrition, nervousness and others.

(b) Footprints — to determine the need for strengthening muscles of the feet or for other corrective procedures.

(c) Strength tests — to determine the need for modified physical activity programs.

Footprints were taken on the pedograph while the tests used were the Rogers' Physical Fitness Tests, results of which are shown in the table.

CLASSIFICATION TABLE

At Quincy Senior High School a complete reorganization of the physical education program was made in September, 1932, grouped according to the following table:

GIRLS

Grade	Group A	Group B & C	Group D
12	75	207	105
11	37	140	62
10	87	158	72
Totals	199	505	239

BOYS

Grade	Group A	Group B & C	Group D
12	121	200	106
11	84	142	67
10	162	117	67
Totals	367	459	240

Among educational objectives we find that health is paramount; moreover physical education activities inevitably and vitally affect health. Therefore health ratings are primary in pupil classification for physical activities.

The general objectives of the pro-

gram are to meet more effectively the individual needs of the pupils, to improve physical fitness, to remove handicaps, to promote social development, and to render pupils more independent of adult supervision.

In order to secure the best results it was necessary to reorganize the old program of physical education and to adjust the new one to the needs of the individual pupil instead of programs adapted to a hypothetical average which actually meets the needs of but few while over-developing the most fit and neglecting those who most need attention.

Tests were given all pupils in grades 9 to 11 to determine classifications for Fall, 1932. These tests were made by physical educators, nurses and physicians.

Special medical and other follow-up examinations were given to determine the proper programs for individuals.

Readjustment was made of senior high school physical education schedules to accommodate pupils needing special attention.

Pupils needing individual daily activities or rest under expert guidance were assigned to special classes.

Physical educators were assigned to corrective programs.

As a result of these tests classifications were made according to Physical Fitness Indices, or P.F.I., and the arch, or footprint angle, in conformity to the following recommendations:

(1) All boys with P.F.I.'s below 85 and all girls with P.F.I.'s below 80 be required to attend daily protective or corrective activities guided by physical educators and nurses and supervised by school physicians.

(2) To these be added all pupils with footprint angles below 20°, all pupils unable to take physical efficiency examinations and all others formerly excused from physical education because of physical defects.

(3) School physicians be assigned at once to examine thoroughly all pupils rated as "D" by physical educators. Examiners should make definite recommendations to guide physical educators in their corrective or developmental programs in the Fall.

(4) The pupils assigned to daily corrective classes be retested in January and re-classified in February, 1933.

(5) Pupils with P.F.I.'s above 115 be excused from compulsory attendance on any physical education classes. They may or may not be re-examined in January, depending on the recommendation of the director of physical education. These pupils should be required to report to their physical directors fortnightly on their physical recreation.

(6) All other pupils be assigned or permitted to select intramural, interschool or individual sports or recreative activities *at least* once and preferably twice weekly, either in gymnasiums, on playfields or elsewhere during school hours, after school or during week-ends subject to approval by physical educators.

In September, all pupils in Group D, some with flat feet, poor posture or other defects, numbering 240 boys and 239 girls, were assigned to special physical education classes meeting four times weekly with activities designed to aid or remove their deficiencies. In these special groups specific activities were given the first half

of the period, followed the last half of the period by an informal program of games, etc.

Intramurals and Student Leadership

One important factor in the work is the opportunity for increased intramural activity. Here in Quincy our intramural demands were such that the city playground facilities were taxed to the utmost. During the last year 1422 boys and 583 girls participated on 147 boys' teams and 84 girls' teams distributed among 14 types of activities for boys and 6 for girls.

The development of a large intramural program would be well-nigh impossible without student leadership. Since 1925 each junior high school in Quincy has had a regularly organized Leaders' unit with a teacher whose extra-curricular responsibility is the development of this work. For seven years these boys and girls have conducted a daily ten-minute "setting up" period for about 3500 pupils.

While the work of these leaders as now organized is not in complete accordance with the present new program, the background is there for the development of a larger sphere of leadership in relation to intramural management and officiating.

Retests of Group D pupils during the last month revealed marked increases generally in P.F.I.'s. Of 161 boys retested in January an average (median) increase of 21 P.F.I. points or 26.6 per cent was shown. The medians gained from 79.9 to 99.9 Of 133 girls also tested in January the average (median) increase was 13.4 P.F.I. points and 19 per cent. The medians gained from 70.8 to 84.2.

Seven boys dropped in P.F.I. more than five points while only one girl declined in P.F.I. The chief gain over the May P.F.I. among boys were those from 60 to 100; among the girls, 55 to 75. The boys in corrective classes whose feet were measured showed an improvement in arch angles of 8° or 39 per cent for 75 cases. Among girls the angles showed an improvement of 4° or 21 per cent for 65 cases.

The examining physicians noticed marked improvement from the May test to the retest in January, in attitude towards the medical examination and towards the program in general.

After retests pupils with P.F.I.'s above 85 (boys) and 80 (girls) were graduated from the four-day-week program. This allowed instructors opportunity to apply more definite effort to raise the fitness of the remaining pupils.

It is obvious that the measurement of results in a testing program will become more accurate as the mechanics of testing become familiar to the testers. Efficiency comes from practice with adults as well as with pupils.

The marked increase in cooperative spirit among staff members is outstanding—all working together for the advancement of the new program.

A look into the future shows that possibilities of much refinement exist in the program. In corrective work there are the vision and hearing tests, now given by the room teachers, also posture, and silhouettes. Provision for rest room facilities would greatly enhance the value of the program.

A cumulative card used from the 7th to the 12th grade will allow a

more complete follow-up of history and give increased value to the filing system.

As we become better acquainted with the demands of the program, better results from medical examinations can be obtained by allowing longer time per pupil. A strength index basis for intramural organization will give more equally balanced teams and consequently produce better results in pupil interest and in the development of cooperation and fair play. An increased intramural expansion can come about only with the development of leaders units to assist in managing and officiating.

In addition to the fourteen activities—basketball, baseball, soccer, outdoor track, indoor track, football, tennis, golf, ice hockey, cross country, boxing, wrestling, bowling and horseshoes for boys, and basketball, soccer, track, tennis, field hockey and bowling for girls—provisions will be made for other types of activities such as hiking clubs, swimming groups, boating and winter sports. Wonderful possibilities exist when schools and city summer playgrounds can carry on twelve months of the year under a cooperative plan.

A whole volume could be written on this subject because of its vital interest and value to our growing boys and girls. It would be hard to find a better medium through which, by objective measurement, real progress can be made in health and physical education.

With these increased health values will come, as a natural outgrowth, a definite increase in individual responsibility—a willingness to assume obligations and to learn by doing.

INDUSTRIAL ARTS VALUES YESTERDAY AND TODAY

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It is always helpful to measure progress by contrasting the present with earlier times. Professor Ashley has presented here a most interesting background for such a study of contemporary forms of industrial arts in the schools.

"My child learn a trade! make my son a mechanic! consider, sir, what you advise — I do, Madam, I consider this matter better than you, who would reduce your child to the necessity of being a lord, a marquis, or a prince, or perhaps one day or other to be less than nothing. I am desirous of investing him with a title that cannot be taken from him, that will in all times and places command respect; and, I can tell you, whatever you may think of it, he will have fewer equals in this rank than in that he may derive from you. . . . Remember, I do not advise you to acquire a talent but a trade; a mechanical art, . . . an art by which you will never get a fortune, but may be enabled to live without one."

THUS wrote Jean Jacques Rousseau in "Emilius and Sophia," which was published in 1763. This man who was scoffed at by the most conservative group of educators, and who was eulogized by the so-called progressives in education, undoubtedly did much to stimulate and ultimately to revolutionize education and politi-

cal thought. Of course he was not the first to rebel against the practices of his day. The general social unrest of the latter part of the seventeenth century gave courage to many men, who were later to become famous, to utter much unfavorable criticism regarding existing ideas on education. Sears, in his "Roots of Vocational Education," briefly sums up their philosophy with the statements: "Erasmus, Rabelais, and Milton, sought to revamp the classics so that they might lend themselves to the preparation for life." They attempted to teach agriculture, natural philosophy, geography and medicine with them. "Francis Bacon declared that all knowledge is for the use and relief of man's estate. Comenius held this idea and attempted to teach something of breadbaking, fishing, weaving, tailoring, cooking, brewing, etc. in "The Orbis Pictus." Schools sprang up in various parts of Germany before the time of Rousseau to teach arts and crafts. Notable among these were Francke's institution at Halle in 1694, and Hecker's Economic-Mathematic School in Berlin in 1747.

Milton had said in his tract entitled "Of Education," "I hold therefore, a complete and generous education, that which fits a man to perform justly, skillfully and magnanimously, all the offices both private and public, of peace and war."

Rousseau might well be said to be the natural outcome of the growing discontent of the latter part of the seventeenth and the early part of the eighteenth centuries. Most of the feeling was directed at elementary education, in which Rousseau would have a new scheme set up, based upon the child's needs in natural development. His ideas were crystalyzed in the efforts of Heinrich Pestalozzi (1746-1827), who gave his life and fortune in attempting to find out "What knowledge and what practical abilities are necessary for the child, and how can they be furnished to the child or obtained by him?" His efforts and enthusiams were shared with Fellenberg, Herbert and Froebel, whose successful experiments and study were further to modify educational content and method in most of the civilized world.

Great liberalizing movements flourished and spread in Europe and America, resulting in the Mechanic Institutes, Lyceums, and the Manual Labor Movement. The short space of this paper merely permits calling attention to these great underlying forces, which gave to twentieth century boys and girls industrial arts in education. For more detailed accounts of the most interesting developments, see Bennett, "History of Manual and Industrial Education up to 1870," Mays, "An Introduction to Vocational Education," Sears, "Roots of Vocational Education," and Lee et al, "Objectives and Problems of Vocational Education."

Manual Training as we commonly think of the work, really began in this country after the Philadelphia Centennial Exposition in 1876. It is true that in Sweden a few years prior to this, Sloyd or tinkering was practised as a home art. This work was introduced in the Swedish schools to help raise the moral standards of boys which had deteriorated with the advent of the factory system. It was rapidly spreading to schools of Den-

mark and France. Dr. Runkel, President of the Massachusetts Institute of Technology became greatly interested in the exhibits of the Imperial Technical Institute of Moscow, Russia at the Philadelphia Centennial. The work represented there consisted of highly technical exercises for the purpose of imparting skills in the use of various tools in order to make more skillful mechanics. This type of work was considered to be very valuable from a disciplinary standpoint and for a few years the manual work which came into the American schools consisted largely of the exercises in wood and metal designed to give the greatest possible skill with hand tools. Students were not permitted to make anything of real worth to themselves until they had first acquired the technical skills which were supposed necessary.

Friese in "Exploring Manual Arts" gives detailed statements regarding a movement which had been developing since 1857 in St. Louis that was ultimately to culminate in the St. Louis Manual Training School of Washington University in 1879. Calvin M. Woodward was the founder of this school. Dr. Woodward had been studying this manual work for boys for some years and thought of it from a different angle than the Russian system, which as was said before, consisted largely of abstract exercises. It was necessary for philosophers like Woodward and a few others whose names were to be known internationally, to give the work the impetus which was to carry it into its present situation in our common school system. To quote from Woodward's book on Manual Training published in 1890:

"Industrial Education does not, as I understand it, mean a lessening of intellectual vigor. There is no design of lowering in any degree the standard of scholarship. It is in no way associated with learning a trade or serving apprenticeship. Industrial education should fit the child, not for any particular industrial work, but for any work to which, in the emergencies of life, he may be forced to turn his attention. Some one has suggested that Manual Culture is a better name than Manual Training in as much as the manual features take on so clearly the form of culture. The suggestion strikes me with great force. It is perhaps too late to use it as a name but it may be used with profit in setting forth in words the character of training."

Woodward specified the kinds of tools to be used, and suggested shop equipments for various kinds of Manual Training. In the woodwork, he spoke of three distinct sets of tools, 1. for joinery, 2. for wood carving, 3. for wood turning. He speaks of four distinct series of processes for working in wood, 1. joinery, 2. wood carving, 3. turning, 4. pattern making. He shows at length how the uses of these tools and the processes involved may be cultural as well as purely manual. The motto for the St. Louis Manual Training School was always kept in mind, "The Cultured Mind—The Skillful Hand." In speaking of the value of Manual Training and Education he says, "I do not find it easy to classify these fruits under such heads as economic, mental and moral; for a benefit conveyed may fall under two or even three heads. I will how-

ever adopt a certain order. I speak of Manual Training as a feature of the higher grades, and within the reach of all boys. It bears fruit only in proportion to its adoption." These fruits he lists in the following order: 1. It keeps boys longer at school, 2. It awakens a lively interest in school and invests its dull subjects with new life, 3. It keeps boys out of mischief both in and out of school, 4. It gives boys with strong mechanical aptitudes but more slow of speech an equal chance with boys with glib tongues and good memories. 5. Manual Training stimulates a love for truth, simplicity, and intellectual honesty, 6. Correct notions of things, relations and forces derived from actual personal experience, go far towards accomplishing the language employed by others to express their thoughts and experiences, 7. Science and Mathematics profit from a better understanding of forms, terms and processes and from the readiness with which their principals may be illustrated, 8. It aids one who choses his own occupation, 9. It raises the standards of attainment in mechanical occupations and invests them with new dignity, 10. It enables an employer of labor better to estimate the comparative value of skilled and unskilled labor and to exercise a higher consideration for the laboring man, 11. It stimulates invention, 12. It increases the bread-winning and home-making power of the average boy, 13. It adds to the efficiency of school work by making school attractive, by arousing the enthusiasm of pupils, by making the work more intelligible, by making pupils more manageable, 14. The last fruit I shall name is that of intelligent citizenship.

Nicholas Murray Butler, President of Columbia University, in 1888, two years before Dr. Woodward published his book on Manual Training, published a pamphlet which was read to the American Institute of Instruction at Newport, R. I. The booklet or paper was called, "The Argument for Manual Training." He says, "Industrial Education is an education in which the training of the pupil's powers of expression goes on side by side with the training of his receptive faculties and in which the training of both is based on a knowledge of things and not of words. Industrial Education is not technical education though too many persons confound it to be." Mr. Butler reviewed the historical development mentioned in the first pages of this paper and emphasized the importance of Froebel with the kindergarten. "Manual Training is mental training through the memory and other powers. There is something incongruous and almost paradoxical in the fact that while education is professedly based upon psychology and psychology ever since Locke emphasized the importance of the senses in the development of mental activity, nevertheless sense training is accorded but a narrow corner in school rooms and even grudgingly. Industrial Education is a protest against this mental oligarchy, the rule of a few faculties. It is a demand for mental democracy.. . . It is the mind that feels and functions and the mind that sees; the hand and the eye are the instruments which it uses. The curriculum which includes Manual Training, in addition to meeting the demands of our present knowledge of the pupil's mind and its proper train-

ing, is better suited to prepare the child for life than that curriculum which does not include it."

"The movement which would place manual training in the school course has commended itself to the ablest and most thoughtful educators all over the world. I do not recall a single name of the first rank that is in opposition. Huxley and Magnus in England, Sluys in Belgium, Breal and Salicis in France, Solomon in Sweden, Paulsen and Goetze in Germany, Hannak in Austria, Seidel in Switzerland, and Gabrielli and Borgna in Italy are leading the thought in their respective countries on the subject. . . . A movement at once so philosophic and so far reaching as that in favor of manual training, has not come into educational thought since Comenius burst the bonds of mediaevalism two and a half centuries ago."

John Dewey's lectures, given in 1899, later printed as the "School and Society," in 20,000 copies before 1913 in various countries were very influential in awakening the public to the value of manual work in the elementary school. He says, "The great thing to keep in mind then, regarding the introduction into the school of various forms of active occupation, is that through them the entire spirit of the school is renewed. It has a chance to affiliate itself with life, to become the child's habitat where he learns through directed living; instead of being only a place to learn lessons having an abstract and remote reference to some possible living to be done in the future."

Manual Training as a subject in school curricula is still very young, and yet it has undergone from the beginning a continuous evolution. The abstract Russian system of exercises was scarcely introduced when advantages of the Swedish Sloyd system were pointed out and this system adopted. Walter J. Kenyon, in the School Journal of March and April 1903, shows the difference thus: "The Swedish idea stakes its all upon the model as something educationally differing from a mere exercise, or practice piece. The difference is chiefly a difference of words." It was thought that if completed pieces of furniture were set before the student as models, and that he be required to make these models instead of merely the joints used in these models, there would be greater educational value and much greater interest on the part of the pupil. Kenyon contended that Sloyd still failed to approach the great contributions which manual work was later to give children of the elementary and secondary schools. That his prophecy for the future was to come true may be seen in his statement that, "The brightest outlook for the early future of manual training is toward the effective coalition of the industrial idea and the art idea in education."

In 1910, Dr. Thomas M. Balliet, Dean of the School of Pedagogy, New York University, addressed the Massachusetts Teachers Association on "Manual Training, Its Educational Value." He used some seven thousand words to show very carefully that, "It develops the motor centers of the brain which preside over the movements of the hand in their infinite variety in skilled handwork; it develops motor sensations and motor ideas which constitute an important element in manual skill; it coordinates

hand movements with vision and establishes that relation between hand and eye which makes the former so effective a guide of the latter; and it converts skilled conscious movements into unconscious habits of precise and accurate movements. Thought is expressed today in iron and steel as well as in print. Some of our most complicated machines express as much thought as some of the profoundest volumes in our libraries. To be able to interpret this thought is, to say the least, quite as important as to be able to read books. Manual training can give this power of interpretation.

"One of the chief functions of the school should be to discover the pupil's special talent, although schools have ignored this duty in the past. The curriculum of the elementary school should be so broad that the pupil may have a chance to try many varieties of work in order to discover his own tastes and talents. This is one of the strongest arguments for the introduction of manual training in the elementary school.

In keeping with Dr. Balliet's idea, it is now the consensus of opinion, that manual work in the elementary and in the junior high school should be as varied and extensive as possible. This has added to existing courses and necessitated the introduction of many new ones. In the last decade have grown up the Home Mechanics and General Shops for the elementary and junior high schools. These have spread rapidly over the country. They have brought with them new terminology and new values. Dr. William E. Warner, in his "Policies in Industrial Arts Education," the Ohio State University Press 1928, states that 358 shop and drawing teachers in Ohio designate the kind of work they are doing by twenty-eight different terms. Space will not permit more than to say that "Manual Arts" was favored by the majority, "Manual Training" was next, "Industrial Arts" ranks third in frequency of mention.

In conclusion, the growing discontent with educational content and method from the seventeenth century to the present time caused leaders of educational thought to advocate and promote handwork in the curriculum. Since its introduction it has gone through an ever-broadening process. It is known by the terms Manual Training, Manual Arts and Industrial Arts, as well as by several other terms. A short explanation of these terms will suffice to give the reader an idea of the development of values indicated by this work. Quoting Dr. Warner again: "Manual Training is an old term and still clings, particularly in the smaller and older areas where shop work is taught. Originally, from 1868 on, it meant just what the term implies, 'hand skill.' . . . Many beliefs that have been associated with the term, among them transfer of training, are now frowned upon so that the term itself has fallen into disrepute."

"The expression 'manual arts' according to Bennett who has promoted its use since 1894 with the naming of the Macy Manual Arts Building at Columbia University, embraces the graphic, mechanic, plastic, textile, book-making, and culinary arts. Historically, the term was an improvement over manual training, because like Sloyd, it added the ideas of utility and design to the skill and hand train-

ing of manual training." . . . "Industrial Arts" according to Dr. Bonser of Columbia University, is a study of the changes made by man in the forms of materials to increase their values, and of the problems of life related to these changes. Among Dr. Bonser's last efforts was his contribution of the "Consumer Purposes and Values of Practical Arts" at the Ohio State Educational Conference at Columbus in April, 1931. He said, "I am disposed to believe that achieving consumer values is the most important and inclusive purpose of all." In this lecture he was able to show in many ways how a knowledge of the real worth of things acquired through the industrial arts enables us to be more competent purchasers and users of the needs of life.

BETTER COLLEGE TEACHING

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When ability in penmanship was measured in Philadelphia it was found that elementary school teachers were high on the scale, secondary teachers somewhat lower, and college instructors lowest of all. If we had a similar scale to measure effective class room teaching, the three groups would probably rank in the same order.

NO longer are traditions and custom in higher education being so blindly followed. No longer are faculties and student bodies submitting meekly to severe, autocratic presidential injunctions, arbitrary administrative demands, unwarranted legislative restrictions, daily preachments in the assembly or the perfervid exhortations of the seasonal commencement. Today the students are speaking out, patrons of the colleges are putting in their petitions, progressive professors are perking up, experimentalists are creating a creditable unrest, preparatory schools are revamping their programs and the press itself is contributing numerous columns to the cause of better college instruction. Our most vigorous executives are calling on us to look over our "lines" and improve the "parts" we are taking in the thrilling drama of higher education. The new-type presidents have clarity of vision and robustness of execution, and they are asking for surveys and reports based on precise, authoritative procedures. The students of higher education are marching forward with the consecration of crusaders.

It is not easy to say how college teaching techniques should be tested, but the specialists in experimental and progressive practices are directing us with surprising and favorable results. Scholars of the earlier school regarded the historical-philosophical method as satisfactory for the needs of their day. By comparing and estimating the values found in contemporary and traditional examples of instructional excellence, educational leaders sought to formulate the principles of superior classroom teaching. The history of education reveals the names, faces and fames of many whose modes of instruction have been admired and imitated

assiduously. Their records and services are frequently rehearsed, and the enduring contributions of their careers fully endorsed. Philosophic reflection and the prolonged contemplation of these models were considered fruitful pursuits in the training of teachers. Logic, precept and theoretical ideals were of the greatest assistance in the cultivation of classroom ability. On these terms the test of time is sufficient to measure and estimate the worth of any technique. Any method that persists through the generations is for that very reason a superior teaching procedure.

There is also the scientific-research school of teacher training specialists. These men indict the group just described, charging its representatives with intuitionism and reactionism. The devotees of the experimental technique always speak in terms of increments to knowledge. They are concerned with first-hand information primarily. The disciples of this division of experts insist on the statistical treatment of raw data, demanding accuracy as well as quantitatively manipulated material. The aim is to establish standards and norms that are truly objective and administratively dependable. Charts, graphs, correlation coefficients and concrete conclusions are the most acceptable media employed. Previous practices and philosophic principles are placed under suspicion, and vigorous efforts are launched to undermine and discredit the *Status Quo*. The constructive side has not been neglected, for a remarkable positive contribution has been made to our science of education. Both our administrative policies and our instructional practices have been discernibly improved and immeasurably benefitted.

At last on the college level we are beginning to sense a change in spirit and a modification in the management of classroom problems. Experiments are being conducted dealing with the admission of candidates to our colleges, placing students properly in connection with curricula and courses, sectioning freshmen in required subjects, testing student achievement in certain of the more objective types of studies, reclassifying according to merit, rewarding unusual accomplishment, seeking the most appropriate class size and other important aspects of college instruction. Investigations have also centered around the following topics of professional interest:

1. The students' semester hour load.
2. The professor's class hour program and student load.
3. The reading load to be required of students in certain courses.
4. Best uses to be made of the college library.
5. The most effective types of assignments for the different subjects.
6. Validity of the project procedure on the university level.
7. Values to be derived from honors courses.
8. Efficiency of the individual conference plan of instruction.
9. Units of field work desired for special kinds of courses.
10. The training of young college instructors during their first period of service.

We have been learning to apply scientific inquiry and engineering technique to the problems of higher education; and college teaching is slowly but surely becoming genuine human engineering. The quality of instruction is being determined with a minimum of guessing; freshmen are being

inducted into institutions according to the more efficient methods used by large corporations; university curricula are being reorganized as the result of tests of utility and value applied to lecture content and delivery, syllabus subject matter and required activities; diagnoses now make possible programs of remedial instruction in many institutions; predictions of academic success and life career prominence are being worked out with a fair degree of reliability; liberal arts colleges are readjusting their aims and detailed functions as the result of surveys and intensive self-examination; the factors that condition success in college are being more fully revealed and made known to students; ways of making college teaching more interesting and enjoyable are being sought and circulated; and the attributes of college professors that impress and influence students most deeply are being ascertained and published.

College teaching must always partake of the nature of guidance and serious counseling. The freshmen and seniors especially require the services of the most experienced professors, men with matured judgments and extensive contacts with the world of reality as well as familiar with the realm of books. We teach not merely subjects and classes; we have individuals before us, adolescents to understand, American boys and girls to direct and straighten out. We need to be scholars indeed, masters of vast ranges of knowledge and experience, but we must never forget that students are living matter, plastic, sensitive and fragile. We need to be careful and painstaking in planning what we want our students to do and in striving to accomplish what our students want us to do for them. The same spirit that permeates the campus the first few days of the year—expectancy, novelty, aspiration and noble resolve — should be conserved and distributed throughout the entire college year. There are a number of youthful attributes and attitudes that must be preserved and fostered:

1. Innate tenderness of mind.
2. Sense of honor and decency.
3. Whole-hearted enthusiasm for study.
4. A thirst for the best things that life has to offer.
5. Hunger to know about God — as well as to learn Calculus and Geology.
6. Implicit native trust of other people.
7. Fondness for music and poetry.
8. Respect for one's own home and parents.
9. Naive curiosity and interest in vigorous intellectual exercise.
10. Ambition to cultivate most fully one's total inheritance.

It takes more than a spacious campus with magnitudinous buildings on an aultitudinous hill to make a college. It takes more than a large staff of high-salaried specialists to produce a university. It takes more than huge museums, libraries and stadiums to send reinforcements to the battle-front well fortified to cope with life's subtle warfare. In the classroom, the professor's office, the fraternity and dormitory lounges, the laboratories and shops we find the best drill fields and practice floors for strenuous training. What are we doing to broaden our students to world-service proportions? Are we encouraging the attitude of scoffing at religion, mocking at conscience and relaxing in moral standards; or are we doing our best to

bring forth the finest intellectual, aesthetic, social and religious qualities that our charges have brought to us from their homes? As we demand attention to academic duties are we at the same time thinking of student preoccupation with financial stress, mental strain, emotional aberration, love affairs, nostalgic stabs, psychic twists, temptations of appetite, social embarrassments, misunderstandings and other unescapable conditions of youth? Freshmen are to be handled as neophytes, and sophomores should be saved from premature sophistication. Upperclassmen are not so much to be instructed by us as to be students with us, seated near us and conferring frankly concerning the pressing problems of living. College students are not to be taught dogmatically or harangued; they deserve a cordial greeting and continuous spiritual refreshment. They are eager to grow strong under competent supervision, and they are willing to go more than half-way to learn the truth about the world.

Great benefits are already putting in their appearance from doing away with coercive repression, disciplinary subjection, excessive executive regulation and severe external control. We are rearing a generation of genuine leaders, young people with creative talent and training in artistic, productive expression; and we are making possible in American society a finer culture than we have ever known. There are numerous improved features in our colleges today, and the attitude of the majority of our students is that the campus stands for effort, honor, cooperation, socialization, culture and nobility of aspiration. It is fair to say that there is no better way for a million young people to live together than for them to band together as students, athletes and young citizens serving their apprenticeship to life. This great army of students has been styled the true salvation army, a mighty force equipping itself for the realization of the following:

1. Peace the world over.
2. Industrial reorganization.
3. Extension of the privileges of democracy.
4. Original expression in the arts and sciences.
5. Christian reconstruction of our civilization.
6. A new freedom applied to our economic and civic institutions.
7. Higher ideals of health, hygiene and sanitation.
8. Better spirit in sport and athletic competition.
9. Practical life applications of academic instruction.
10. Rebuilding the college curriculum to meet modern conditions.
11. Modification of instructional methods to meet the needs of individual students.
12. Provision for the cultivation of special capacities and talents.
13. Practical apprenticeship in extra-curricular activities.
14. Attainment of ability to assume leadership in community affairs.
15. Cultivation of social, recreational and aesthetic interests.

Our better students want a college where there will be no snap courses, but where many options and electives will be available. They want purely factual courses reduced to the minimum; for they seek principally the chance to think things through. They desire the privilege to pursue the ideal that haunts them and drives them.

They demand the opportunity to become spiritually free and to be allowed no small independence in cultivating the character qualities which they admire most in others. They want to be initiated into the mysteries of life in a clear, convincing and wholesome manner. They cry out for light and understanding, for sympathetic instruction and unrestricted revelation. They are asking for a more practical brand of academic content—more serviceable sociology and economics, more concrete psychology and philosophy, more specific values in history and political science; and they covet the right to receive at least a relative mastery of some modern foreign language to lighten the load of international travel and to permit them to enter daily into the life of some other nation than their own. A conscientious classroom teacher will set up aims that transcend mere acquisition of quantitatively measurable material and the attainment of subject matter standards. The primary purpose of the professor ought to be to awaken potential genius, to stimulate and increase youthful enthusiasms for the better things of life and to develop in students the best possible character qualities and personality traits. The instructor who is sincerely interested in the welfare and happiness of his students will seek not only to select appropriate content material and to organize it according to sound psychological principles, but he will also use every legitimate means to vitalize and motivate the required assignments and suggested projects. Library readings, laboratory duties, field trips, class participation and original or critical papers can all be made desirable and pleasurable activity, perhaps as agreeable and satisfying as fraternal, athletic and social events. A friendly approach and brotherly attitude can work miracles in redeeming the unproficient and laggard student, especially the one who has offended by inattention, truancy or negligence. Those who feel that some injustice has been done to them can be saved and steered back to courageous, manly effort. The personal interest and friendly ministrations of sympathetic professors will accomplish wonders in winning the unfaithful to the cause of scholarly achievement.

Success in teaching depends more than a little on the atmosphere generated in the classroom; and a few simple appurtenances and decorations add materially to the effectiveness of the instructional activities. The numerous barren lecture halls are dismal and distracting, frequently making it impossible for students to concentrate on the serious subjects under discussion. It is not generally the case that bleak surroundings serve to safeguard students from mind-wandering. It is more to the point to have an environment of related materials to suggest and arouse an eager interest in problem solving. There is usually need for a small number of ornaments, pieces of apparatus for demonstration purposes, a few book-shelves for easily accessible references and illustrative literature. Also there is need for some alluring specimens of museum value and suited to the courses offered. And finally there should be select maps, charts, diagrams that fit into the type of instruction carried on in any particular classroom.

It is the desire of each of us to keep

out of the rut, to preserve our freshness and vigor, and to retain as our dominant quality a keen sense of human interests and life values. Professors do not have to be eccentric recluses or absent-minded philosophers. The little jokes and jibes from the student body and the stories in the college paper are the finest material wherewith we may slough off our mannerisms, bigotry, egotistic attitudes and other offensive habits of mind and speech. We should observe closely the countenances of our students and take bravely to heart the caustic comments and hostile criticisms so abundantly available in any college community. Professors who give the best instruction are not infrequently the ones who receive most willingly and assimilate most thoroughly the estimates, judgments and counsels of daring, facetious students.

One of the cardinal weaknesses and unforgivable errors in our profession is for the teacher to reveal that he does not know his "stuff." It is the unpardonable pedagogical sin to be caught and compelled to postpone, bluff or misrepresent the truth. Class morale is lowered, and enthusiasms are destroyed. Students have a perfect right to look for well-planned instruction and thoroughly prepared lessons. Living from hand-to-mouth educationally is as bad for the youthful instructor as depending on threadbare lecture notes is for the experienced professor.

Robert Ingersoll is credited with having said on one occasion that "Colleges are places where pebbles are polished and diamonds are dimmed." Our psychological tests are providing evidence of a changing viewpoint. If we will but put to use the scores and precious data that collect on our shelves, and if we will only make known more eagerly to our colleagues the most vital facts that can be assembled about our students and if we will at least moderately revise our instructional customs to meet the challenge represented by the crucial needs of our probation students and problem cases, we shall be contributing heavily to the cause of improving college teaching technique. Just a little more conscious effort to put our instruction "over" might be the means of salvaging some otherwise rapidly sinking undergraduate.

It is true that there is a fundamental difference between scientifically controlled experiments and superficial innovations; but just as our best theory is often the outgrowth of persistent progressive practice, even so are popular (or unpopular) innovations sometimes the crude beginnings of what later may become a nation-wide experiment. The colleges of our earlier educational history served chiefly theological orthodoxy, political stand-pattery and the economic Status Quo. The college of tomorrow has a more inspiring function to fulfil. Let us unite in promulgating such a brilliant program of experimentation, progressive instruction and scientific measurement of our work that the succeeding generations will not dare accuse us of having been reactionary educationally or lacking in courage intellectually. May each of us in our own domain devote our best energies to the development of more justifiable and more effective procedures in the classrooms of our American colleges.

SHOULD SCHOOL INSTRUCTION MAKE PUPILS MORE ALIKE?

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The writer points out that overcrowding the learning program is far from helpful to the pupils. Both the slow pupil and the one most capable can be cared for if the program is wisely planned.

THIS query was raised by data collected at the Institute during the past three years. In what were designed to be minimum essential tests for high school physics, in 168 classes out of a total of 230 enrolling more than 5000 pupils in many schools in various parts of the country, computed standard deviations were greater after instruction than before instruction, on identical tests. This condition is also shown graphically by the tallied distributions of scores. This means that generally there is greater variability, i. e. a greater range of ability, after instruction than before.

One might expect that studied instruction would change a group on a low average level of ability to a more homogeneous group on a higher average level of ability. This viewpoint supposes that instruction is definitely directed toward certain specific desired outcomes. It is the one assumed when some school courses are made prerequisite for other courses. The data obtained in the experiments to which reference is made do not substantiate the expectations. If these may be taken as representative, instruction is not making pupils in a given class group more alike but more unlike, although the general level for the whole group is raised.

The question "Is it not reasonable to think that, after any course has been completed, the students enrolled should be more homogeneous although on a higher general level of ability?" still persists. One answer to this question is the paradoxical answer, yes and no. In other words, on a limited body of materials which may be thought of as minimum essentials or fundamentals, students should be more alike in ability after instruction; while in other more specialized phases, they should be more unlike. This implies for every school branch of study two sets of objectives: (1) the integrating core of minimum essentials, and (2) the differentiating project activities. (A project is here meant to be any individual activity chosen purposefully by a pupil.) The explanation of less homogeneity after instruction in the classes mentioned may be assigned to incomplete learning by practically all pupils. Achievement records on the minimum essential tests substantiate this conclusion, for the mean score per class on the final test was but 65.4 percent for the experimental series of 1930-1931, and considerably less for previous years. (It should not be understood from this that high school physics is in worse condition than other high school and college courses. There is reason

to believe that these records are better than those generally procurable.)

There are several causes which may be given to account for the incomplete learning of fundamentals in these experiments. One is inefficient teaching and this is of vital concern to teachers. Is not much teaching too superficial by being too extensive, concentrating too little attention on important concepts, and allowing too limited a time for understanding to form naturally and psychologically in the minds of pupils? The intellectual food which we are presenting is too bulky and voluminous for good digestion and assimilation by most pupils. It needs to be smaller in volume and broken up into finer elements. In other words the body of fundamentals should be less per unit of time. This is especially evident when we consider that, during the same time period, the pupil is receiving instruction in other branches, and the differentiating project program for each pupil should be allotted a liberal time element.

Practically all achievement records which have been reported on objective test material, point plainly to an overcrowded learning program for school pupils. This is constantly growing worse because of the very rapid increase of knowledge and the absence of concerted attempts to select the more fundamental for specific instructional concentration. While people are demanding that the school definitely aim toward the development of worthy character traits, the immensity of the knowledge program prevents wide attention to purposeful character training. It may be said that the former defeats the latter as surely as though it had set out to do so. If pupils are given tasks which are impossible of performance with the assumption that they must succeed, are not excellent conditions provided for the practice of fraud, deceit, braggadocio, and "make believe?" There should be mastery of functional essentials and there should be development of worthy character traits. A wisely planned minimum essential and project program may care for both. *The first should be within the powers of the slowest normal pupil in the group; the second should allow for infinite pupil variability.*

There is question if criteria for good tests such as those often given in courses in educational statistics are not neglecting what may be called "mastery tests" for want of a better name. Giving blanket specifications for all educational tests such as, "No one should get a perfect score," and "No one should get a zero score," is unwise. Common sense indicates that excellent use may be made of minimum essential tests where all pupils will be expected to make practically perfect scores. Lack of attention to these tests by teachers tends to beget the habit of superficial and incomplete learning. There is need of complete learning of some elements in every course. Selection of these elements is of great importance. The emphasis upon mastery tests suggests that some methods now given for determining reliability and validity must be revised for these tests. The correlation method for example is unsuitable.

THE SCHOOLS AND THE DEPRESSION

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Whether we like it or not, the school budgets are being cut. The extent to which the children must pay for this reduced income by reduced opportunities depends upon the vision of the teachers themselves.

THE faith of the American people in free public education has been demonstrated continually since those first days of colonial settlement on the bleak New England shores. Since the foundation of the federal government there has developed in the country a comprehensive and complete structure of free public schools. Truly all of the children of all of the people can receive that type of training that they believe will best fit them for their place in the American scene. The American schools, both academic and vocational, rank high in the list of the schools of the world. A cursory glance at the budget of any American community will reveal the extent to which the people of the entire nation believe in education.

Now in the days in which budgets are being pruned and revised, the question arises as to the relative value of free public education as compared with other items of the budget. The mad scurry on the part of communities to reduce their costs of government brings up the whole question of the wisdom of curtailing certain educational practices and institutions. A serious and scientific attitude must characterize those who set themselves up as the custodians of the public fund, and no mere slicing here and there will result in the greatest common good. Education in its manifold phases and forms is the basis upon which rests the happy and well-ordered state.

The depression has, among other things, increased the task of public education. Enrollment is larger in most areas, and the schools are doing relief work in a number of communities. Children, who normally would have gone to work, are remaining in school due to the dearth of jobs. This increase in attendance is heaviest in the high school and the vocational classes. There is an estimated decrease of thirty-five per cent in the number of fourteen and fifteen year old children leaving school for work in 1930 as compared with the 1929 number. In Minneapolis five hundred high school graduates of the January, 1932, class continued as post graduates because they could find no positions. Preliminary statistics of enrollment in federally aided vocational courses show an increase of 18.4 per cent for 1931 as compared with 1930.

Unemployed adults too have sought the school for the purpose of learning new trades and processes of industry. Short unit courses have had to be devised to give these adults an opportunity to rehabilitate themselves in these days of economic insecurity. New York City has assisted some eight or nine thousand adults in the past year in day vocational classes.

Numbers of children have also sought the school as a haven during

the winter where they might find shelter and maintenance in the form of warmth, food and clothing. It is a question just how far the school should go in this type of relief work for the underprivileged. In times like the present, however, it may become necessary for the school to assume these added tasks due to the breakdown of the authorized agencies of charity. The fact remains that in many communities the schools are doing just this type of relief work. The educacational budget provides in some areas for this relief work. In others the administrative burden is carried by the school while the food and clothing is provided by the local agencies. In many cases the work is made possible by the voluntary contributions of the teachers, who have very often contributed lavishly from their monthly salaries. In New York City the contributions of the teachers and other school employees in one month reached the sum of $260,000. The Pittsburg (Pa.) schools have been supplying milk to ten thousand undernourished pupils daily and serving meals to four thousand needy children. In February, 1932, twelve hundred pairs of shoes were distributed. In Philadelphia breakfasts were served to eighty-six hundred children in a single day. San Francisco teachers agreed to contribute 3 to 12 per cent of their salaries for 1932-33 for relief work. These are just samplings of the vast job of relief work carried on by the school.

Meanwhile the school budgets have been sharply cut. More work is to be done, and less money is available with which to undertake this added responsibility. Mayors and councilmen have demanded drastic reductions in educational expense. In the hope of covering up the vast inefficiencies of municipal government, attention has been called to the huge amount comprising the school budget. The result is that "Hard Times" is a spectre stalking through the American school corridors.

In the mad scramble to reduce expenses for free public schooling various plans have been followed. In some places the school year has been cut to as short a period as six months. In Arkansas 725 rural schools closed on the first of February for the rest of the year turning thirty-six thousand children out of the class room. In some of the mountain districts of the south the schools did not open at all.

Reduction in administrative expenses has been a less drastic and much more needed retrenchment than the closing down of the school plant.

Some school systems have effected economies by improving their management, working out saner building and maintenance schedules and by keeping a closer watch on supplies and equipment.

Another method of cutting expenses is through the actual cutting of teacher's salaries. The teacher in many communities finds himself faced with an added task and a slimmer pay envelope. The teaching load has been increased and the extracurricular duties have been laid upon the already overburdened teacher. While some cities, however, have found it possible to balance the budget without reducing salaries, other places have given cuts of from 3 to 16 per cent. The worst picture is found in certain communities which have accepted the profes-

sional services of teachers and failed to make payment for these services.

Frequently, and over a wide area, the schools find it necessary to cease making additions to the staff. When a teacher resigns and the post is left vacant, his work is assigned to teachers already on the faculty. In some cities temporary and even regularly employed teachers have been let go. In Minneapolis the average size of classes has increased from 38 to 40 in the elementary schools and from 27 to 30 in the high schools. Pittsburg is teaching twenty-four hundred more pupils this year with a faculty of thirty-five less teachers.

Large cities are faced with quantities of unemployed teachers. New York City has a huge supply of these people who find it impossible to find positions in the schools of the metropolitan area. Meanwhile the teacher-training institutions pour forth new teachers every year.

A survey of the American schoools in this, the fourth year of the depression, is one of mixed good and evil. The value of free public education to a community needs no defense, even in these troublous times. In an honest and searching study of governmental costs there are ample opportunities for retrenchment by eliminating useless appendages. In the schools themselves there is much that can be dispensed with and for the good of all concerned. There are many costly devices that are time-hallowed and traditional. They must go. Perhaps then, through the depression the American schools will realize that their objective is to meet the needs of the young people that flock to their halls, and by so doing mould the future character of the community. The school is unjustified when it uses the taxpayers' money to maintain traditional values and practices that have no place in a modern world.. The danger, however, lies in a spasm of reckless and shortsighted economies. Those of a pessimistic nature lament that all the wonderful progress that the science of education has made since the War will go in this rush for reduced costs. They lament the fact that all the patient hours of research and experimentation are to be lost in the melee of retrenchment. They see a picture far blacker than facts allow. The school must rise to defend itself. The school must be willing to clean house and rid itself of worthless and out-of-date material. The school must show a willingness to co-operate with all of the agencies of community life in the struggle to lighten the burden of the taxpayer. The school must do this in order that it may save the great advances that were made in the periods of prosperity and in the happy days when the counting of every dollar was not the role of the politician. A concerted effort on the part of educators to co-operate in the systematic and scientific working out of community budgets will do much to save the situation. The American school must fight and fight hard to maintain itself in a position of world-wide eminence. It is trite to say that the future welfare of the American people depends upon the work of the great public schools. A cramped and badgered school system is bound to result in a narrow, ignorant and unhappy citizenry.

EDITORIAL

By Herbert Blair

OBJECTIVES IN PHYSICAL EDUCATION

No other single subject in the secondary curriculum has been introduced so recently, been subject to so much mandatory legislation, or cost so much for facilities and equipment in proportion to the per pupil use as has physical education. McLean, in replies from 2,492 high schools in 1910, found that only 231 said they had regular instruction in gymnastics. Flanders shows that in 1913 but seven states required that physical education be taught. Today thirty states require the state department to outline a course in physical education, twenty-six make it compulsory in the high school, fifteen specify the minimum amount of time, and sixteen specify the type of instruction.

The amount of space in the new buildings that is given to the physical education department ranges from a third to an eighth, with the average close to twenty per cent of the entire building allotted to this one department of instruction. Separate gymnasiums for boys and girls, corrective rooms, dressing rooms, shower rooms, team rooms, apparatus rooms, represent some of the activities for which this space is used.

Physical education as a school subject is not only unique in its rapid introduction, its mandatory requirements and the expense involved, but is also unique in the lack of agreement among its advocates as to its aims and objectives, as well as the means to be followed in attaining them.

In one school pupils will be grouped for class instruction on a basis of physical fitness; in another the basis of division is scholastic attainment (freshmen, sophomore, junior, or senior); while another, found even more frequently than either of these, is to group together pupils having in common a vacant period after other classes are scheduled. The class size for physical education in schools of equal enrollment will vary from those where a group of 25 to 30 is considered an adequate teacher load to schools where one teacher is expected to handle groups of 150 or more.

Is the aim of physical education to correct physical defects? Schools can be found where the floor space, equipment and type of instruction all show that this is the main objective. Far more instructors, however, ignore this phase entirely. Is the aim to prepare for the spring festivals? Schools can be found where girls and boys both swing indian clubs and wands week after week. And the exhibit in the spring does attract admiring thousands. Yet most schools use neither clubs nor wands.

Schools can likewise be found where the aim, as shown by the amount of time devoted to it, seems to be the development of skill in throwing baskets, or ability in tumbling, or accuracy in marching, or agility on apparatus, or grace in social dancing. And some, especially those poorly equipped with showers, seem to show by the exercises used that the objective is to go through the physical education so very gently as not to leave any after effect.

One school system known to the writer (Lockport, New York) has for each pupil a medical examination, a physical fitness record, and also an index of all outside activities. With these records before him, the work assigned by the director to each pupil is in reality for him physical education.

YOUR SCHOOLS AND MINE

Roy C. Woods, Ph. D.
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In this department Dr. Woods will answer to the best of his ability any or all questions on educational topics that are addressed either to him at the address above, or to Education. It is to be understood that the writer alone is responsible for the answers given.—H. B.

This department was conceived by the conductor and permitted by Education in the belief that such a need was prevalent. We hoped thus to make the magazine more valuable to the readers and enhance the publishers' policy of making the journal serve the educational forces of America. We have conducted this department now for over a year and the real evaluation must come from its users. Have we been of help? Have we contributed to the solutions of your problems? Did you write us the questions that were puzzling you? Did we help when you did? Should this department be discontinued, enlarged or curtailed? May we not hear from you before June first when you part to your several summer activities and homes, so that we may plan for next year? A card, in which you express your views, addressed to the editor of Education, in care of The Palmer Co., 120 Boylston Street, Boston, Massachusetts, or to the conductor of this department, Dr. Roy C. Woods, in care of Marshall College, Huntington, West Virginia, will be considered in planning for Education for the next academic or school year. Do not put this off! Let us know at once how you feel in the matter.

Is it advisable to have cases of corporal punishment witnessed by the principal or another teacher? If so, why?

I doubt it. The reason usually advanced is that it gives a witness against unfair reports that cruel methods were used by you. It seems to me that corporal punishment should be rarely used and that when it is used it should be humanly and not cruelly used, thus relieving the need of a witness. If there is doubt as to the kind of report that may emanate from the episode I am inclined to think it is the wrong kind of punishment to use. None but a hardened offender or sullen, impudent, over-aged pupil will *plan* to distort such a case, and in these cases I have never found corporal punishment of any value. They are practically ready for the incorrigible group.

Who has authority over pupils on the way to and from school?

Laws vary in this respect. In some states the teacher is in "locus parentis" from the time a child arrives at school until he arrives at home again, whereas in other states the authority starts when he leaves home. Consult your own state school code. Perry discusses this problem in his "Discipline as a School Problem," pp. 162 ff, and his "Status of the Teacher," pp. 37 ff.

In this time of depression I am hearing much concerning the frequency of text book changes. How frequently should books be changed in the public schools?

It is my feeling that in general the changing of text books has not been abused and that the present discussion is largely traceable to two sources: i. e., disgruntled salesmen who were either affected by losing the adoption, or to idle talk by laymen politicians, or news writers, hunting for something to do. I feel, in answer to your question above, that the books should be changed whenever the pupils will profit thereby more than the parents of the district will lose by the change. I know that is a variable, but that is just what the question is. It is a variable. Personally, I found that, with a little forethought in my choosing, no great number of old books would be left. I also found that if the choice was made on the merits of the book in terms of pupil values and not on the merits of salesmanship, I had little or no trouble resulting from it. Text books are the tools of a profession, and laymen can no more choose the teacher's tools with safety than they can the dentist's drills, the surgeon's knives, or the engineer's transit. Any member of other professions feels free to change his tools when better ones are available, without questioning the public. Hence text books should be chosen and changed by the profession whenever the pupils will profit by it. The public nature of the change warrants a little discretion in the exercise of the function.

From the same source I get the question, "Should I require my teachers to keep lesson plans?"

I think so, and to show you that I am not "old-fashioned," you will find that Reavis, Pierce and Stulken in "The Elementary School," published in 1931, on page 298 ff., suggests the same thing. They are a help for the supervisory officer. They make more sure the adequate preparation of the teacher and insure that the pupil will get a planned and connected lesson. They are a source of help to curriculum committees. If revised at the close of the day and filed, they will be an aid to the teacher when the same unit is taught again. In case of illness and a substitute teacher is called, it is of unlimited value to the new teacher and the class to find plans of what has been done and for what will be done for a few days in advance while the substitute is getting acquainted with her task. As a superintendent I asked my principals to require that plans be kept up for five days in advance. Rather than cause continuous investigation bordering on "snooping" to find out if they were so kept, we withheld the sick benefits of five days' absence on full pay for any teacher who was "caught" without plans when the substitute came to her room. This proved very effective after the first illness without pay developed.

DEPARTMENT OF BOOK REVIEWS

Studies in Creative Writing. By *William Robert Wunch* and *Mary Reade Smith*. 358 pages. 1933. Henry Holt & Co., New York.

This interesting book is the outgrowth of several years of actual experience in the classroom by the authors. Miss Smith is teacher of Creative Arts in the Senior High School of Asheville, N. C. Mr. Wunch founded a similar department in the High School at Greensboro and has taught at Rollins College. Both are admirably fitted by training and experience to awaken the dormant desire to do creative work. Not only in the minds of their pupils, but equally in the minds of those fortunate enough to have access to this admirable book.

The first hundred pages deal with that material with which all writers work. Each chapter and each exercise is designed to acquaint him with a definite phase of the craft of literary creation. There is a natural and logical development from one exercise to another; and every paragraph suggests far more than it actually says. Compare the opening paragraph, for instance, with the beginning of almost any good text-book:

"In every community of any size there are people who, because of some outstanding achievement, seem to us to wear a halo. The rich man on the hill is one of these glamoured folk. The poet whose name belongs not to one community, but to the world, is another. In the same group are the artist whose landscapes are famous, the singer who has sung before crowned heads, the actress whose name glitters in Broadway lights, the athlete whose feats merit streamer headlines on sport pages, and the statesman who represents a nation's ideals."

These hundred pages are rich in suggestion and inspiration. There are lists of suggested readings, exercises to be written out, quotations that make you want to seize a pen and try your hand at writing. Somehow the authors of this little book have discovered how to create that urge that impells the reader to *act*. This, it seems to me, is the unique quality of "Studies in Creative Writing."

Equally interesting, and of even greater value to the beginner, is the second part. It deals with impressions—those that come through the senses, as well as impressions of atmosphere. Dialogue, action and conflict, suggestion and recall, feeling and mood, reflection and thought, are all treated adequately. For instance, under "Feeling and Mood" are to be found Spell, Humor and Farce, Joy and Exaltation, Sadness and Longing, Fear and Mystery, Love, Loyalty and Patriotism, and Prayer. Each topic is amply illustrated by selections in prose and verse, selections admirably chosen and full of helpful suggestions. We are given frequent examples of the work of students, showing how the principles so clearly enumerated have been put in practice, and serving as added inspiration to the reader.

Seldom has your critic seen a book so replete with excellent material, so interesting in its contents, and so likely to set the reader or student at work creating something—or attempting to create some bit of writing of his own.—EVERETT L. GETCHELL, Boston University.

Our Social World. By *Grace A. Wallis* and *Wilson D. Wallis*. Published by McGraw Hill Book Co. 1933. 378 pp. Price $1.60.

The main business of the American public school is to develop good citizens. Too often this has been thought to concern only the political aspects of citizenship. Most of the civics courses have been and still are dominated by the details dealing with political democracy. Important as the political is, it is the least important phase of democracy. Of more importance are the social and industrial

aspects of democracy. It is the failure to live well together in these two fields that constitutes the greatest danger to democracy. Yet, to date, the discussion of social and economic problems have received but slight consideration in the secondary schools. Economics and sociology have been reserved to the post-secondary schools. There these courses have generally been excessively academic and filled with abstractions, and only remotely related to present-day living—if at all.

If people are to live together well in a democracy, then the knowledges, understandings, and sympathetics that are necessary to such living must be presented below the college level, for according to School Life for October, 1932, "of every 1,000 pupils in the fifth grade, 610 enter high school, 260 graduate, 160 enter college, and 50 graduate." It is evident then, that if these knowledges, understandings and sympathies are to be "gotten over" they must be offered during the secondary school period. Until recently there have been few books adapted to such instruction on the secondary level. "Our Social World—An Introduction to Social Life and Social Problems," by Grace Allen Wallis and Wilson D. Wallis, is a new textbook attempting to give high school students the needed background.

While the essential theme of the book is that of sociology, the method of presentation is a departure from the traditional way of considering that subject. This is not unorthodox when it is remembered that the book is intended for the secondary school. It tries to deal with the real problems of the social world in which the student is a real member. The book aims to acquaint the student with the character of the important social relations that prevail in small and large communities, and with the nature of the culture that shapes social relationships.

The book pays attention to the historical background of present social problems. This is to be commended, as it is necessary for students to understand that present-day problems have their roots in the past.

Among the topics discussed are population and immigration, racial adjustments, custom, public opinion and propaganda, the family, the school, the church, the nation and the community of nations, development of modern industrialism, social control of modern industrialism, poverty and pauperism, delinquency and crime, etc.

At the end of each chapter is an excellent summary. The questions and exercises provided at the conclusion of each chapter are rather commonplace and lacking in challenge. The collateral reading idea is excellent and should be encouraged. The books listed for reading represent a very careful selection.

The pictures are well chosen. The statistics are up to date and are so arranged that high school students may make effective use of them.

The book represents a worthy contribution in a field where much still remains to be accomplished.—FRANKLIN C. ROBERTS.

Biology For Beginners. By *Truman J. Moon*, Head of Science Department, Middletown, N. Y., High School, and *Paul B. Mann*, Head of Department of Biology, Evander Childs High School, New York City. 741 and xxxii pages. Henry Holt and Company, New York.

A book on Biology should be of value to beginners in proportion to its influence upon them for a better interpretation of the environment of life. If, by such a book, our young folk are inspired to a greater appreciation of the beauty of the world, a clearer and more accurate understanding of the facts of life, and a practical application of themselves to Nature's laws and processes, then the book is a good one. Beginners in Biology, irrespective of their age, should be led to search, think, wonder and admire when they are brought face to face with the marvelous facts of life. The practical, the factual and the esthetic aspects of our lives have a large biological income. We should learn to see more clearly, to hear more accurately, to search more keenly, and to value life more highly as a result of biological studies. In other words, a book on Biology for beginners is a good one if it interprets to them things as

they are, and inspires them to use these life-forms and life-laws aright.

Such a book this one seems to be. A wealth of information has been crowded (without apparent crowding) into the 741 pages, and the book is so attractive in print, in illustration, and in general form that one finds many occasions to admire and praise.

The illustrations are particularly good. Chosen from reliable sources, picturing new things in the world of research and exploration, and presenting a great variety of forms and processes, they cannot do otherwise than appeal to those who use this book.

While there are many of the older and more prosaic expressions that always attach themselves to any science, there are many new statements, sprightly descriptions, and fascinating portrayals of things new and old. Though reviewing the book in the midst of many other duties, the writer has been compelled to surrender to the lure of many of the pictures, the frankly-true statements, the chapter headings and the graphic tables, and to take time to look at them and read them.

While in certain places the reviewer has noted a lack of data that he might wish to find, it must be conceded that almost all that could be expected is to be found in this new book, with a most delightful addition of unexpected things. This is an excellent book for beginners in Biology.—EARLE AMOS BROOKS, Boston University School of Education.

Visual Aids in Education. By *Joseph J. Weber.* Published by Joseph J. Weber, 1930. Valparaiso University, Valparaiso, Indiana. (Mimeographed) pp. 220.

While this book is the latest of Dr. Weber's contributions to the literature of Visual Instruction, it is his first attempt at the text-book type of presentation. "Visual Aids in Education" contains thirty-three chapters, divided into three parts. Part I includes twenty-two chapters devoted to the values and limitations of visual materials and the visual method in the work of the school. Part II, consisting of chapters twenty-three to twenty-eight, deals with the experimental uses of visual aids in various school subjects. Part III, consisting of chapters twenty-nine and thirty, discusses needed research in the visual aids movement.

In the preface of the book Dr. Weber summarizes its purpose as follows:

"The main purpose in writing the book was to compile for the progressive educator a balanced summary of the available scientific evidence on the values and limitations of visual aids in education, and then elaborate upon the evidence by way of generalization and application so as to inspire this educator in making a common-sense adaptation of visual materials and methods to the purposes of the school.

"More in detail, the book aims (1) to show that the visual aids movement has not arisen to revolutionize present educational theory and practice, but rather to modernize them in the direction of greater economy in learning; (2) to point out the particular function of photographic media in enlarging the perceptual environment of the learner and thus facilitating in him a wider transfer of training; (3) to evolve a body of psychological principles of special value to workers in subject correlation and curricular reform; (4) to formulate implications for instructional procedures in the case of educational films, lantern slides, and stereographs; (5) to abstract and evaluate most of the accumulated experimental evidence in relation to its special significance for teaching the various school subjects; and (6) to suggest and formulate a series of problems that need further study and experimentation before some visual aids can be used to their greatest advantage." (p. ii)

One finds in "Visual Aids in Education" as thorough a summary of research in the field of visual instruction as appeared up to the time of its publication in 1930. In addition, the research studies have been interpreted and applied to the teaching of the various school subjects. For example, in chapter 23, "Visual Aids in the Teaching of Geography," one finds

summarized all the research studies bearing on the teaching of geography with visual materials. The book contains also many suggestions on how to use the motion picture, the lantern slide, and the stereograph.

Here is a volume that may be used as a text-book. It reflects a wide acquaintanceship with the literature of visual instruction. It is to be hoped that later a printed, illustrated edition will be forthcoming which would materially increase its usefulness.—F. D. McC.

Simple Directions for Making Inexpensive Visual Aids. The Department of Visual Instruction, 1812 Illinois Street, Lawrence, Kansas, 1932.

The purpose of the booklet is to provide helpful information which will assist teachers or pupils in the construction of visual aids in the classroom or laboratory. The subjects treated include the following:

Etched glass lantern slides, Paper cut-out lantern slides, Ceramic pencil lantern slides, India ink lantern slides, Cellophane lantern slides, Photographic lantern slides, Home-made Stillfilms, Film slides, The electric map, Spatter work, Pencil outlines of leaves, Leaf prints from carbon paper, Blue prints, Sepia prints, Sources of materials.

This pamphlet will be of interest and value to teachers of geography, history, science, agriculture, fine arts, industrial arts, reading, spelling, and the social sciences, as well as to students in visual instruction classes.—F. D. McC.

The Child and Play. By *James Edward Rogers.* Century Co., 1932, 205 pp., $2.00.

Mr. James E. Rogers, Director of the American Physical Education Service, in his latest volume, "The Child and Play," has dealt with the vexing problem of what must be done to provide the child with play.

Mr. Rogers, because of his position as well as unofficially, has always been actively interested in play as a means of developing health and vigor, as well as for its educational values. He has based the volume on the findings of the White House Conference on Child Health and Protection. That conference was doubtless the broadest and most searching study of the physical welfare of children ever attempted in this or any other country. The value of "The Child and Play" lies in the fact that the author has gone over the voluminous reports of the White House Conference and has picked out from the mass of material the salient facts of interest, thus making the meat of the report available to the busy teacher.

The book looks forward to the not too distant day when a safe and spacious play space under skilled supervision will be available to every American girl and boy. Two specific needs for play are recognized and treated fully: "First, happy and normal play as a safeguard to childhood growth; second, play as an insurance against the threats of the adult future to the health of both mind and body."

The author first lists the various benefits to be derived from play and calls our attention to the problem of play in meeting the deleterious forces of our present-day civilization. Play in the school, in the home, and on the playground are discussed in detail. The book considers the child's play impulses and describes the more or less successful attempts of modern society to meet the needs of youth. The ever-present problem of proper and adequate play leadership is discussed, and minute descriptions of the different play types are included.

Because of the thoroughness of the Conference study, the material is authentic and distinctly modern in appeal as well as in philosophy. The data have been collected by eminent leaders in the play field and interpreted by another whose past experience and present position have given him intimate contact with play leaders throughout the United States.

The book should prove to be of particular value to parents, teachers, and welfare workers on account of its meticulous treatment of the intriguing problem of determining the most sane and wholesome methods of satisfying the child's play impulses.—C. D. Giauque, Director, Physical Activities for Men, Boston University.

NEW EDUCATIONAL BOOKS

We acknowledge receipt of the following publications of interest to the readers of EDUCATION. Mention here does not preclude review in this or subsequent numbers of

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The Study Readers. Books four, five and six. By *Alberta Walker* and *Mary R. Parkman*, both of the Department of English, James Ormond Wilson Teachers College, Washington, D. C. New edition, 1933, cloth bound and illustrated. Charles E. Merrill Company.

The Living Language. A Latin Book for Beginners. By *Wilbert Lester Carr*, Professor of Latin, Teachers College, Columbia University, and *George Depue Hadzsits*, Professor of Latin, University of Pennsylvania. 404 pp., cloth, illustrated. 1933. $1.36. D. C. Heath & Company.

The Art of Educational Research. By *Harold H. Abelson*, Ph.D., College of the City of New York. 1933. 332 pp., cloth. $2.00. The World Book Company.

My Subtraction Drill Book. By *Guy M. Wilson*, Professor of Education, Boston University. 1933. 50 pp., paper. The Macmillan Company.

Classroom Organization and Management. By *Frederick S. Breed*, Ph.D., Associate Professor of Education, University of Chicago. 472 pp., cloth. The World Book Company.

The following are all from the Bureau of Publications, Teachers College, Columbia University:

Carrying the Mail. A Second Grade's Experiences. By *Avah W. Hughes*. 253 pp., cloth, illustrated.

Essays in Comparative Education. Republished Papers, Volume II. By *Paul Monroe*, Ph.D., LL.D., Professor of Education and Director of the International Institute, Teachers College, Columbia University. 1932. 311 pp., cloth.

The Teaching of Mathematics in the Secondary School. The Eighth Year Book of The National Council of Teachers of Mathematics. 264 pp., cloth.

Social Studies Concepts of Children in the First Three Grades. By *Joy Muchmore Lacey*, Ph.D. Contributions to Education No. 548. $1.50.

A Study of the Elementary Teaching Personnel of Hunterdon, Morris, Sussex and Warren Counties, N. J. By *Mary Hunter McLees*, Ph.D. Contributions to Education No. 512. Cloth. $1.50.

Vocational Education in Agriculture in Federally-Aided Secondary Schools. By *G. A. Schmidt*, Ph.D. Contributions to Education No. 534. Cloth, $1.50.

Children's Collecting Activity Related to Social Factors. By *Walter Nelson Durost*, Ph.D. Contributions to Education No. 535. Cloth, $1.50.

Survey Study of Teacher Training in Texas, and a Suggested Program. By *George M. Crutsinger*, Ph.D. Contributions to Education No. 537.

Certain Procedures of Studying Poetry in the Fifth Grade. By *Honora Margaret Frawley*, Ph.D. Contributions to Education No. 539. Cloth, $1.50.

Demands on the Schools. By *J. Flint Waller*, Ph.D. Contributions to Education No. 542. Cloth, $1.50.

A Technique for Computing the Amount of New Aid Required for State Equalization Programs. By *Eugene Stallcup Lawler*, Ph.D. Contributions to Education No. 547. Cloth, $1.50.

Furnishings and Equipment for Residence Halls. By *Mary De Garmo Bryan* and *Etta H. Handy*. Paper covers.

Student Questionnair. By *Percival M. Symonds* and *Virginia Lee Block*. Paper pamphlet.

Citizens' Organizations and the Civic Training of Youth. By *Bessie Louise Pierce*, Associate Professor of American History, University of Chicago. 1933. 428 pp., cloth. Charles Scribners' Sons.

Youth and His College Career. A Discussion of Student Problems from the Viewpoint of the High School Graduate and the College Beginner. By *J. E. Seyfried*, Associate Professor of Education, University of New Mexico. 1933. The University of New Mexico Press. 251 pp., cloth, $2.25.

Indoor and Outdoor Plays for Children. By *John Farrar.* Illustrated by *Winifred Bromhall* and *Mary M. Ludlum.* 201 pp., cloth, 1933. Noble & Noble.

Elements of Economics. Revised edition. By *Charles Ralph Fay,* Erasmus Hall High School, Brooklyn, N. Y. 1932. 629 pp., cloth, $1.68. The Macmillan Company.

An Evaluation of History Texts. A Check List. By *Miriam A. Compton,* M.A., Assistant Professor of History, Western Kentucky State Teachers College, Bowling Green, Kentucky. 1932. 53 pp., paper. McKinley Publishing Co.

English Drill Exercises, Book I and Book II. Compiled by the English Teachers of the Rockford Senior High School, Rockford, Illinois, under the direction of Mellie John. 1932. Paper covered workbooks, 120 pp. and 96 pp. Book I, 48c; Book II, 40c. The Macmillan Company.

My Long Division Drill Book. By *Guy M. Wilson,* Professor of Education, Boston University. 53 page workbook, 32c. The Macmillan Company.

The Sunny Skies Workbook, to Accompany "Sunny Skies." By *Sister Mary Estelle* of the Sisters of the Order of St. Dominic, Grand Rapids, Michigan. 1932. 64 page workbook, 24c. The Macmillan Company.

Selection, Purchase, Storage and Distribution of Supplies. Bulletin No. 1 of the National Association of Public School Business Officials, by The Committee on Supply Research. 58 pp., paper. 1932. National Association of Public School Business Officials, John S. Mount, Secretary, Trenton, N. J.

Text and Tests in Plane Geometry. A Combined Textbook, Students' Workbook, and Testbook Made for Modern Courses. By *David Eugene Smith,* Teachers College, Columbia University, *William David Reeve,* Teachers College, Columbia University, and *Edward L. Morss,* Editor of Mathematical Textbooks. 286 pp. 1933. List price, 88 cents. Ginn and Company.

Current English Usage. By *Sterling Andrus Leonard,* University of Wisconsin. English Monographs No. 1. Published for the National Council of Teachers of English. 232 pp., paper. 1932.

Insurance Practices and Experience of City School Districts. Bulletin No. 2 of the National Association of Public School Business Officials. By the Committee on Insurance Research. 1932. 230 pp. National Association of Public School Business Officials, John S. Mount, Secretary, Trenton, N. J.

Entrance and Promotion Practices in City School Systems. Standards and Accounting Procedures. By *Paul R. Mort,* Professor of Education, and *W. B. Featherstone,* Research Associate in Educational Administration, Teachers College, Columbia University. 1932. 73 pp., mimeograph. Bureau of Publications, Teachers College, Columbia University.

Fitting the School to the Pupil. An Application of Educational Accounting Techniques to the Chicago Schools. By *Paul R. Mort,* Professor of Education, Teachers College, Columbia University, *W. W. Wright,* Professor of Education, Indiana University, and *W. B. Featherstone,* formerly Research Associate, Teachers College, Columbia University. 1932. 141 pp., paper. Bureau of Publications, Teachers College, Columbia University.

Holland and Its People. By *Sallie Kate Mims,* Teachers' Lesson Unit Series No. 44. Life of the Early Hebrews, by *Gertrude Maloney,* Teachers' Lesson Unit Series No. 49. Building a Playhouse, by *Clayton Burrow,* Teachers' Unit Lesson Series No. 50. Bureau of Publications, Teachers College, Columbia University.

Education for a New Era. By *A. Gordon Melvin.* The John Day Pamphlets, No. 21. 30 pp., paper. The John Day Company. 25 cents.

Handling Test Scores. By *Richard S. Harter,* Ph.D., Temple University, and *C. H. Smeltzer,* Ph.D., Temple University. 58 pp., paper. 1933. Henry Holt & Company. $1.25.